IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

EXPLORING THE INFLUENCE OF MUSIC ON THE QUALITY OF SLEEP IN EMERGING YOUNG MALE ADULTS.

Research paper submitted as a partial fulfilment for the degree of B. A. Hons. Applied Psychology (2021-2024)

Authors

Yashvi Agarwal, Dr. Kriti Bhargava

Student, Assistant Professor I

Amity institute of psychology and allied sciences

Amity University, Sector 125, Noida, Uttar Pradesh, India – 201301

Abstract

The aim is to see the effects of exploring the Influence of music on the quality of sleep in emerging young male adults which focuses on how sleep disturbances can lead to other chronic disorders, to avoid that consequence it is important to deploy appropriate interventions. One such intervention is music which has proved to have calming and relaxing properties on the mental, physical and emotional competence of an individual which can help resolve sleep difficulties. The study consisted of 100 Male participants between the ages of 18-25, conveniently chosen. The responses were taken through online survey, 'Music in mood regulation scaled' developed by Suvi H. Saarikallio was used to measure music indulgence and 'Sleep Quality Scale' developed by Yi, Hyeryeon, Shin, Kyungrim, and Shin, Chol to measure the sleep quality in an individual. The data was analyzed by using Pearson's correlation method and by using Microsoft excel sheet coding. The result came out to be 0.23 which shows a positive relationship between the variables.

Key Words: Sleep, Music, Males, Interventions, Pearson's Correlation, Young Adults, Online

Introduction

- Background of Sleep Issues in Young Adults

Sleep disturbances can affect the quality, quantity and duration of an individual's sleep within a night. Since early adulthood is marked by significant changes in the social activities, economic, physical and psychological changes, academic demands, employment, and technology use; sleep disturbances have been commonly witnessed because of imbalances in any of these factors. Studies have shown that 41% of the females and 42.3% males develop experience sleep disorders such as obstructive sleep apnea (OSA) and chronic insomnia by the age of 22. This suggests that many young adults may also be affected by insufficient sleep, which can have serious repercussions on their overall health and well-being. These findings raise an alarm to study and correct the factors leading to sleep disorders at such an early age to improve the overall well-being of an individual.

Over 80 types of sleep disorders have been recognized by DSM IV R, which not only affects a person's mental but also physical health eventually. They have been associated with more serious issues such as Depression, anxiety, Cognitive impairment, muscle stiffness, body pains, restlessness, behavioral issues and even immunity issues. Sleep difficulties can trigger overall quality of life and well-being by affecting relationships, moods and even recreational activities. Some of the factors that can contribute to development of these issues can be delayed bedtimes, extended screen use, irregular sleep schedule, substance use, lifestyles choices, hormonal and biological factors.

- Significance of Sleep Quality for Young Adults

Acknowledging the crucial role of adequate sleep quality and sleeping patterns especially at such an early age of young adulthood can rule the rest of your life. Proper interventions are required to correct the behavioral patterns and develop resilience. Sleep can disturb thoughts, emotions, behaviors, functioning in daily life, interpersonal relationships, communication patterns. Poor sleep quality is associated with engaging in risky behaviors among young adults, such as substance abuse, reckless driving, and unsafe sexual practices. Sleep deprivation impairs judgment, impulse control, and decision-making abilities, increasing vulnerability to accidents and injuries.

Quality sleep enhances emotional competence, positive social interactions, metabolism, vitals, energy levels, improved mood and subjective well-being. Several studies (some of which are talked about further in the research paper) have focused on ways to understand reasons for sleep disturbances and disorders developed by individuals and how to tailor interventions according to the needs and requirements, it was noted that music therapies have resulted in significant improvement for people, irrespective of their reasons for the sleep disturbances. Generalized anxiety disorders, cancer patients, pregnant women, students with high demands, older adults and more factors were highlighted for irregular sleep patterns.

- Role of Music in Sleep Regulation

Certain types of music can reduce muscle tension and procure calming effects which promote relaxation and might help induce sleep. Music can lower anxiety levels, heart/breathing rates, blood pressures and distract from unnecessary intrusive thoughts as well as worries.

Soothing melodies are noted to shift focus from the negative stimuli to the rhythmic patterns of the music that can stable the biological processes which help the onset of sleep. Exposure to good music can be productive since it helps reduce stress and anxiety levels and evokes positive emotions such as joy, tranquility and calm promoting relaxation, emotional well-being and contentment of being in the moment. It is also perceived as an effective coping mechanism and incorporating it into the bedtime routines should help the individual to fall asleep and wake up refreshed. This research paper focuses on theoretical framework for how music interventions can help improve sleep quality and patterns.

- Gender-Specific Considerations

More males than females are recorded with sleep difficulties and eventually developing sleep related disorders at an early age which get worse as they age. This can be associated with lack of reaching out for help to avoid being labelled as “weak” and fear of not being understood by others. The rate of early adults with sleeping issues has reached alarming levels, so it is crucial to raise awareness and implement early interventions for overall increased well-being and life satisfaction of the individual.

- Theoretical Framework

There are theories that talk about the relationship between Music and sleep, some of them are:

- Biopsychosocial model of Sleep

The biopsychosocial model of sleep integrates the biological, psychological, and social dimensions for sleep. According to this framework, music functions as a psychosocial intervention that affects sleep quality by interacting with psychological and biological processes, such as mood and emotion control, and neurochemical activity and physiological arousal. How music is applied and experienced in relation to sleep is also influenced by social variables, including personal preferences and cultural standards.

- Emotion Regulation Theory

According to the emotion regulation theory, music tends to affect mood and emotional states. A variety of feelings, from calm and relaxation to excitement and stimulation can be evoked by listening to music. People can efficiently regulate their emotional states, lowering tension and anxiety levels, which can then help with sleep, by selecting from a wide range of music depending on the person that makes them feel good and encourages relaxation.

- Arousal Regulation Theory

This idea claims that people may manipulate their arousal levels through music, which in turn helps them regulate their psychological and physiological states. It is believed that relaxing, sleep-inducing music with gentle tempos and soothing melodies lowers focus levels. On the other hand, faster tempos or more upbeat rhythms may raise alertness, which makes them less prone to falling asleep.

- Stimulus Control Theory

According to the Stimulus Control Theory, external factors can affect sleep, and, through conditioning, some stimuli can learn to be linked with sleep. When it comes to music and sleep, listening to soothing music often before bed may act as a resting cue, indicating to the brain that it's time to relax and get ready for sleep. Music can become more strongly associated with sleep over time, making it a more potent cue for encouraging sleep.

- Expectancy Theory

Expectancy Theory states that people's experiences and outcome can be influenced by their expectations and ideas about the effects of music. People may experience placebo-like effects if they think that listening to music before bed will help them unwind and sleep better. In these cases, the perceived efficacy of music as a sleep aid is influenced by people's expectations. Music may be more effective in promoting sleep if listeners have positive expectations and beliefs about how it can improve sleep.

These theories laid the groundwork for many research studies to understand the relationship between music and sleep. Several Interventions have been altered with the aim of optimizing the use of music as a sleep-promoting tool.

To conclude, there are several disadvantages of Sleep difficulties which needs to be altered using affective interventions, Music has been recognized as one of them and proved to be efficient one through several studies. This Research paper also focuses on the relationship between the two variables and understanding how and when people implement music as a mechanism in their daily lives.

Review of Literatures

(Trahan et al., 2018) In 'The music that helps people sleep and the reasons they believe it works: A mixed methods analysis of online survey reports' revealed that 62% of participants in a public survey utilized music as a sleep aid, and that the usage of music, age, and stress were all very significant predictors of the quality of sleep. Music was more frequently used by younger people who were more musically engaged to help them fall asleep. Four themes emerged from the study: music has special qualities that promote sleep, it is a regular part of sleep routines, it creates a conducive environment, and it suppresses external or internal stimuli that may otherwise interfere with sleep. The findings demonstrate the various channels through which music influences sleep and emphasize the significance of music in fostering restful sleep.

(Wang et al., 2016) in 'The Effects of Music Intervention on Sleep Quality in Community-Dwelling Elderly' sought to find out how music therapy affected the quality of sleep that senior citizens in Xi'an, China, got. Participants with poor sleep quality who were 60 years of age or older received biweekly phone calls and education on sleep hygiene. For three months, the intervention group listened to music for thirty to forty-five minutes every night on an MP3 device equipped with a music database. According to the research, the intervention group's global PSQI score improved steadily over the study, from 13.53 at baseline to 9.28 at one month, 8.28 at two months, and 7.28 at three months. Significant group-by-time interaction effects were also shown by the intervention group in the three-part sleep latency, sleep efficiency, and daytime dysfunction scores and the overall PSQI score.

(Frances Yap et al., 2017) in 'Rhythm-centered music making in community living elderly: a randomized pilot study.' examined the effects of creating music with a rhythm (RMM) on the social isolation, depression, sleep quality, and overall quality of life of older adults. A randomised controlled trial including two groups of 54 volunteers was carried out. Patient-related outcome data was gathered before to, during, and following the ten weekly RMM sessions that comprised the intervention. According to the study, there was a non-significant decline in EQ5D, GDS, PSQI, and LSNS scores while participants in RMM. The probability of improvement in these scores was non-significantly increased by RMM participation in binary analysis. To sum up, RMM is a fascinating substitute tool for integrated medicine; nevertheless, more comprehensive research should examine its impacts on the aged, including a qualitative component to assess the effects not measured by quantitative indicators.

(Kim E. et al., 2016) in 'Effects of Meditation versus Music Listening on Perceived Stress, Mood, Sleep, and Quality of Life in Adults with Early Memory Loss: A Pilot Randomized Controlled Trial' examined how two 12-week relaxation programs—music listening (ML) and Kirtan Kriya Meditation (KK)—affected older individuals with subjective cognitive decline (SCD) in terms of their health-related quality of life (QOL), sleep, and perceived stress. Participants in the KK or ML programmes, which involved sixty community-dwelling older persons, were required to practice every day for a duration of 12 weeks, or around three months. At 12 weeks, or around three months, the results demonstrated a significant improvement in psychological well-being, mood, and sleep quality. In terms of QOL-Mental Health, psychological well-being, mood, and perceived stress, KK participants showed

higher increases. The study found that individuals with SCD who practiced a basic meditation or mindfulness programme saw improvements in stress, mood, well-being, sleep, and quality of life (QOL), with benefits that persisted at six months and were especially noticeable in the KK groups.

(Sheppard and Broughton., 2020) in 'Promoting wellbeing and health through active participation in music and dance: a systematic review' investigated the effects of two 12-week relaxation programmes on health-related quality of life (QOL), perceived stress, and sleep in older adults with subjective cognitive decline (SCD): music listening (ML) and Kirtan Kriya Meditation (KK). The sixty senior citizens who lived in the community and took part in the KK or ML courses had to practice daily for a period of 12 weeks, or around three months. The results showed a significant improvement in psychological well-being, mood, and sleep quality at 12 weeks, or around three months. KK individuals demonstrated greater gains in QOL-Mental Health, psychological well-being, mood, and perceived stress. They discovered that stress, mood, well-being, sleep, and quality of life (QOL) improved in SCD patients who engaged in simple mindfulness or meditation practices. (Innes et al., 2018) in 'Effects of Mantra Meditation versus Music Listening on Knee Pain, Function, and Related Outcomes in Older Adults with Knee Osteoarthritis: An Exploratory Randomized Clinical Trial (RCT)' examined how two 12-week relaxation programmes, music listening (ML) and Kirtan Kriya Meditation (KK), affected health-related quality of life (QOL), perceived stress, and sleep in older persons with subjective cognitive decline (SCD). For a duration of 12 weeks, or roughly three months, the sixty senior persons who were residents of the community and enrolled in the KK or ML courses were required to practise every day. At 12 weeks, or around three months, the results demonstrated a significant improvement in psychological well-being, mood, and sleep quality. Greater improvements in QOL-Mental Health, psychological well-being, mood, and perceived stress were seen in KK persons. They found that SCD patients who practiced basic mindfulness or meditation showed improvements in stress, mood, wellbeing, sleep, and quality of life (QOL).

(Dickson and Schubert., 2019) in 'How does music aid sleep?' investigated the effects of two 12-week relaxation programmes on health-related quality of life (QOL), perceived stress, and sleep in older adults with subjective cognitive decline (SCD): music listening (ML) and Kirtan Kriya Meditation (KK). The sixty older citizens who lived in the community and signed up for the KK or ML courses had to practise daily for a period of 12 weeks, or nearly three months. The results showed a significant improvement in psychological well-being, mood, and sleep quality at 12 weeks, or around three months. KK individuals showed greater changes in their mood, perceived stress, psychological well-being, and quality of life—mental health. They discovered that stress, mood, wellness, sleep, and quality of life (QOL) improved in SCD patients who engaged in simple mindfulness or meditation practices. (Hu et al., 2021) in 'University students' examined how two 12-week relaxation programmes, music listening (ML) and Kirtan Kriya Meditation (KK), affected health-related quality of life (QOL), perceived stress, and sleep in older persons with subjective cognitive decline (SCD). The sixty senior residents who enrolled in the KK or ML courses were required to practise every day for a duration of twelve weeks, or about three months. At 12 weeks, or around three months, the results demonstrated a significant

improvement in psychological well-being, mood, and sleep quality. More alterations were seen in the mood, perceived stress, psychological well-being, and mental health—quality of life—of KK persons. They found that SCD patients who practiced basic mindfulness or meditation saw improvements in stress, mood, wellbeing, sleep, and quality of life (QOL).

(Riedy et al., 2021) in 'Noise as a sleep aid: A systematic review' investigated the effects of two 12-week relaxation programmes on health-related quality of life (QOL), perceived stress, and sleep in older adults with subjective cognitive decline (SCD): music listening (ML) and Kirtan Kriya Meditation (KK). For twelve weeks, or around three months, the sixty senior residents who signed up for the KK or ML courses had to practise every day. The results showed a significant improvement in psychological well-being, mood, and sleep quality at 12 weeks, or around three months. Additional changes were observed in the KK people's emotional state, sense of stress, psychological well-being, and mental health—that is, their quality of life. They discovered that stress, mood, wellness, sleep, and quality of life (QOL) improved in SCD patients who engaged in simple mindfulness or meditation practices.

(Gao Et al., 2020) in 'SWS (Slow Wave Sleep) Brain-Wave Music May Improve the Quality of Sleep: An EEG Study' examined how two 12-week relaxation programmes, music listening (ML) and Kirtan Kriya Meditation (KK), affected health-related quality of life (QOL), perceived stress, and sleep in older persons with subjective cognitive decline (SCD). The sixty senior residents who registered for the KK or ML courses were required to practise daily for twelve weeks, or around three months. At 12 weeks, or around three months, the results demonstrated a significant improvement in psychological well-being, mood, and sleep quality. Further alterations were noted in the KK individuals' emotional condition, stress level, psychological welfare, and mental health—that is, their overall quality of life. They found that SCD patients who practiced basic mindfulness or meditation experienced improvements in their stress, mood, wellbeing, sleep, and quality of life (QOL).

(Lee et al., 2019) in 'Music for Sleep and Wake-Up: An Empirical Study' examines the effects of music on waking up and inducing sleep in young adults who do not have sleep disorders. It focuses on the actual effects of pop music on wakefulness and sleep, in contrast to previous research. A hardware and software-component system were used in two trials. Effective musical elements for quick sleep induction and wakefulness are the focus of the analysis. The results were used to demonstrate two application scenarios.

(Cordi et al., 2019) in 'Effects of Relaxing Music on Healthy Sleep' investigated the significance of sleep for human health and welfare and found that sleep abnormalities can cause both physiological and mental illnesses. Although results for objective sleep measures vary, music consistently enhances the quality of one's subjective sleep. Before a 90-minute nap, music was proven to increase subjective sleep quality when compared to a control text in a study involving 27 female subjects. Music boosted the low/high frequency power ratio, lowered sleep stage N1, and increased slow-wave sleep during the rest phase. However, these advantages were only available to people with low suggestibility indices. According to the study's findings, both subjective and objective sleep metrics can be improved by listening to music before a nap.

(Yamasato et al., 2019) in 'Characteristics of music to improve the quality of sleep' sought to identify the qualities of music that help people with sleep disorders get a better night's sleep. It made use of analysis markers like tempo, note density, redundancy of values, and the scaling exponent of the melody's zero-crossing spectrum. The quality of sleep was found to be enhanced by music with a slow pace, subtle rhythmic shifts, and modest melody pitch fluctuation. There were no appreciable variations in the note density or scaling exponent among the three groups into which the musical works were divided. The study's conclusions help people with sleep difficulties receive individualized music therapy.

(Dickson and Schubert., 2022) in 'Musical features that aid sleep' examines the qualities of music that promote sleep. 78% of the thing's students used to help them go asleep were successful, according to a study of 161 students. Middle-range frequencies, medium pace, legato articulation, major mode, and lyrics were among the commonalities among these compositions. Their higher rhythmic activity, legato articulation, and lower frequency range set them apart from unsuccessful compositions. According to the study's findings, sedative music does not always promote better sleep, but sedative music's characteristics are linked to better sleep. Identification has a major influence on the choice of musical compositions for sleep research.

(Liu et al., 2015) in 'Effects of music listening on stress, anxiety, and sleep quality for sleep-disturbed pregnant women' discovered that pregnant women's quality of sleep can be enhanced by music listening at home. In this study, 61 women who were placed in either the control group or the music listening group were paired with 121 women who had trouble sleeping. The sleep quality, stress level, and anxiety of the music-listening group were significantly better than those of the control group. Lullabies were the most often used musical genre, followed by classical and crystal baby music. According to the study, pregnant women who have trouble sleeping may benefit from two-week music listening programs that lower tension and anxiety.

(Jespersen et al., 2015) in 'Music for insomnia in adults' investigated the impact of music listening on adult insomnia and discovered that it might be useful in raising subjective sleep quality. The study employed a random-effects meta-analysis and included six studies with 314 individuals. With a mean difference of 2.80 between listening to music and receiving no treatment or treatment as usual, the results indicated a benefit of music listening. The study could not discover any data, nevertheless, to imply that the intervention improved other sleep-related outcomes. More studies are needed to prove how music affects other components of sleep and the effects of insomnia during the day.

(Gassner et al., 2021) in 'Effectiveness of music therapy for autism spectrum disorder, dementia, depression, insomnia and schizophrenia: update of systematic reviews' evaluates the impact of music therapy (MT) on patients suffering from schizophrenia, dementia, autism spectrum disorder (ASD), depression, sleeplessness, and other mental, emotional, and physical health issues. Ten randomised controlled trials proved that MT for schizophrenia increased social functioning, overall quality of life, and mental health. MT enhanced social communication, behaviour, brain connection, and parent-child interactions in ASD. MT improved mood, apathy,

neuropsychiatric behaviour, communication, and bodily functions in dementia patients. Further studies are required to examine the long-term consequences.

(Austen et al., 2021) in 'Warm-up exercises reduce music conservatoire students' pain intensity when controlling for mood, sleep and physical activity: A pilot study' examines how a two-week daily warm-up exercise intervention affects students studying classical music in terms of pain severity, interference, and psychological discomfort. A waiting control group and an exercise group participated in the study. No significant effects were observed on any of the outcome variables. Nonetheless, the exercise group showed a higher reduction in pain intensity when sleep, anxiety, depression, and physical activity were considered. Furthermore, there was a significant correlation found between the exercise group and the delta scores for pain interference, anxiety, and sadness, but not with the control group. In both groups, there was a significant correlation between the delta scores for anxiety and pain severity. The results imply that regular warm-up exercises can lessen the severity of discomfort experienced by musicians, but only under specific circumstances.

(Muralidharan et al., 2023) in 'An Exploratory Thematic Analysis of Factors That Influence Sleep in Music Therapy Undergraduate Students' investigates the effects of a two-week daily warm-up exercise regimen on pain severity, interference, and psychological discomfort in students studying classical music. The study included two groups: one for exercise and the other for waiting control. Not one of the outcome factors showed any discernible influence. Nevertheless, when factors including sleep, anxiety, depression, and physical activity were considered, the exercise group showed a much greater reduction in pain intensity. Additionally, a noteworthy association was observed between the exercise group and the pain interference, anxiety, and sadness delta scores, but not with the control group. The delta ratings for pain severity and anxiety showed a significant association in both groups. The findings suggest that regular warm-up activities can reduce how uncomfortable something feels.

(Mofredj et al., 2016) in 'Music therapy, a review of the potential therapeutic benefits for the critically ill' examines how a two-week daily warm-up exercise programme affects students learning classical music in terms of pain intensity, interference, and psychological discomfort. Two groups were included in the study: one for waiting control and the other for exercise. Not one of the result components was seen to have any bearing. However, the exercise group had a significantly higher reduction in pain intensity when variables such as sleep, anxiety, depression, and physical activity were considered. Furthermore, a significant correlation was seen, but not with the control group, between the exercise group and the pain interference, anxiety, and sadness delta scores. There was a strong correlation observed in both groups' delta ratings for anxiety and pain severity. The results imply that warming up on a regular basis can help lessen discomfort.

(Wang et al., 2018) in 'The use of music therapy in the treatment of mental illness and the enhancement of societal wellbeing' investigates the effects of a two-week daily warm-up exercise plan on pain intensity, interference, and psychological discomfort in students studying classical music. The study had two groups: one for exercise and the other for waiting control. Not a single component of the outcome was perceived to be significant. Even so, when factors like physical activity, anxiety, depression, and sleep were considered, the exercise group's reduction

in pain intensity was noticeably higher. The findings suggest that warming up regularly can help lessen discomfort. The anxiety and pain severity delta ratings in both groups showed a significant association. The findings suggest that warming up regularly can help lessen discomfort.

(Joanne Loewy., 2022) in 'Music Therapy as a Potential Intervention for Sleep' analyzed that the Sleep deficiency is linked to chronic health problems, and healthcare practitioners are increasingly focusing on its impact on health and wellness. Music therapy research has shown potential to induce sleep in illness and wellness, and its efficacy as a cost-effective intervention is being explored. The detection and treatment of sleep disorders can decrease exacerbated problems in various diseases. Future studies should include a Conditions of Sleep Analysis and include a music therapist to find clinical decisions relevant to the music. Music can increase comfort and decrease anxiety impeding sleep ability, and recognizing the conditions where music is most effective can lead to best outcomes.

(Hong-Yu et al., 2017) The purpose of "Effect of music intervention for hyperarousal in people with different stress-related sleep vulnerability" was to look at how music intervention affected hyperarousal in people who were highly vulnerable to stress-related sleep. The China Rehabilitation Research Center's thirty-three healthy participants were split into two groups: sixteen with high stress-related sleep vulnerability and seventeen with low stress-related sleep vulnerability. Brain wave data and physiological indicators were collected for the study using a multi-parameter physiological index monitoring device. The findings demonstrated that before and after treatment, high vulnerability participants had lower β wave, higher skin conduction, and an amplitude of SMR. Following therapy, every participant experienced decreased blood pressure, elevated skin temperature, elevated breathing rate, and decreased heart rate. According to the study's findings, music intervention helps people who are highly vulnerable to hyperarousal and prevents chronic sleeplessness.

(Leubner and Hinterberger., 2017) in 'Reviewing the Effectiveness of Music Interventions in Treating Depression' studied Depression as a common mood disorder that can lead to reduced social function, reduced quality of life, and increased mortality. There aren't many recent studies supporting the use of music interventions as a depression treatment substitute, despite their demonstrated effectiveness. According to this analysis of 28 original studies with 1,810 individuals, music intervention gradually decreased depression levels. When elderly people engaged in music therapy activities or listened to music, their condition improved. The review offers valuable data for future projects focusing on music-based interventions to improve symptoms of depression. The study focused on patients diagnosed with clinical depression.

(Joanne Loewy., 2015) in 'NICU music therapy: song of kind as critical lullaby in research and practice' said that Music therapy can enhance neonatal function and reduce anxiety in parents during NICU stays. A licensed music therapist who plays live music for babies based on their vital signs can improve the bond between baby-parent triads and dyads. In 272 newborns, the use of parent-selected songs in a song-of-kin intervention has been compared to a folk theme. In nonconfrontational music psychotherapy sessions, parents can express their dread

or anxiety associated with preterm birth. In addition to providing a sense of security and containment, music can also encourage parents in their grieving.

(Lucja Bieleninik., 2016) in 'Music Therapy for Preterm Infants and Their Parents: A Meta-analysis aimed to review and meta-analyze the effect of music therapy (MT) on preterm infants and their parents during NICU hospitalization and after discharge. 1803 pertinent records were used in the study, of which 14 contained adequate data for meta-analysis. Random-effects meta-analyses showed significant big effects favoring MT for both mother anxiety and baby respiratory rate. Nevertheless, there was not enough information to confirm or refute any effect of MT on other physiological and behavioral outcomes, or on short-term baby and service-level results. For most outcomes, there was a significant degree of variation across studies. The dearth of studies evaluating long-term results limits the review. In summary, there is enough data to support the notion that MT has a significant positive impact on both mother anxiety and the respiratory rate of the newborn.

(Gutiérrez and Camarena., 2015) in 'Music therapy in generalized anxiety disorder' presents a pilot intervention using music therapy to reduce generalized anxiety disorder (GAD) symptoms in patients receiving pharmacotherapy. The Beck Anxiety and Depression Inventory was used in a pre-test/post-test format over 12 two-hour intervention sessions. The findings indicated that GAD patients' levels of anxiety and despair were significantly decreased. However, more research is required to validate these results. The study suggests that music therapy could be an effective psychotherapeutic treatment for GAD patients, but further evaluations are needed to address potential limitations and ensure its effectiveness.

(Kavurmacı et al., 2020) in 'Effect of Music Therapy on Sleep Quality' aimed to decide the effect of music therapy on sleep quality in nursing students. With students who had no neurological or psychiatric disorders, hearing issues, or medical therapy for sleep disorders, and who scored five or higher on the Pittsburgh Sleep Quality Index (PSQI), the study was done using an experimental pretest-posttest control group design. While the control group continued their regular sleeping schedule, the experimental group was told to limit the loudness of their MP3 player to less than 70% for one hour each day. The findings demonstrated that music therapy can enhance the quality of sleep, as the experimental group's posttest PSQI mean scores were lower than those of the control groups.

(Huang et al., 2017) in 'Effects of music and music video interventions on sleep quality: An examination of the effects of music and music videos as therapies on the objective and subjective quality of sleep-in people with sleep disorders were conducted through a randomized controlled experiment. 71 adults participated in a randomized controlled study in which they were randomized to the control, music, and music video groups. Before going to bed, the music group listened to Buddhist music for half an hour, and the music video group watched Buddhist music videos. There was no intervention given to the control group. The music group's subjective total sleep time was much longer than that of the control groups, but the objective sleep measures indicated no influence. According to the study, more investigation is required to advance our understanding of how music therapies can improve the quality of sleep for adults who experience sleep disorders.

(Jespersen., 2023) in 'The effect of music on sleep in hospitalized patients: A systematic review and meta-analyses were conducted to assess the impact of music on hospitalized patients' sleep quality. Ten randomized controlled studies with 726 patients were looked up. The most popular intervention was a half-hour of relaxing music in the evening. The meta-analysis showed that music improved sleep quality when compared to standard care. It's likely that music can improve hospitalized patients' sleep as a cheap, safe added intervention, as no side events were

noted during the trials. The study discovered that while the participants' choices, listening times, and times of day varied, most of them spent 30 minutes each evening listening to relaxing music.

Methodology

Aim: This study aims to explore the Influence of music ('Music in mood regulation scaled' developed by Suvi H. Saarikallio) on the quality of sleep ('Sleep Quality Scale' developed by Yi, Hyeryeon, Shin, Kyungrim, and Shin, Chol) in emerging young male adults.

Objectives: The aim of this study is to Compare the relationship between two positive variables- Music and Sleep and to decide if they have a positive, Negative or no significant relationship at all. Music in Mood regulation scale was used to measure how people use music to regulate their emotions and Sleep Quality scale was used to decide the sleep quality and patterns of an individual. Keeping that in mind, surveys will be conducted and the relationship of the variables using the Pearson's correlation method will be proved.

Hypothesis

H0: Influence of Music is positively corelated with the Quality of Sleep in Emerging Young Male Adults

H1: There is no meaningful relationship between Influence of Music and the Quality of Sleep in Emerging Young Male Adults

Study Design: Quantitative study

Sample Size: 100

Sample Age: 18-25

Sample Population: Delhi NCR

Inclusive Criteria: Young Adults between the ages of 18-25, Males

Exclusive Criteria: Children below the age of 18, Adults above the age of 25, Females

Research Design: Research paper is a comparative study using the Pearson's Correlation method to analyze the relationship between music and sleep. A sample of participants were recruited, including individuals from the age group of 18-25 from different socioeconomic backgrounds. Sample size was taken as 100 males.

Tools:

- 'Music in mood regulation scaled' developed by Suvi H. Saarikallio

Reliability:

Internal Consistency: MMRS has proved good internal consistency, showing that the items within the scale measure the same underlying construct reliably. Studies have reported high Cronbach's alpha coefficients for the MMRS, typically ranging from 0.80 to 0.90.

Test-Retest Reliability: Test-retest reliability measures the stability of scores over time. While specific test-retest reliability coefficients for the MMRS may vary across studies, it generally shows acceptable stability, indicating that individuals' responses are still consistent when assessed at different points in time.

Validity:

Content Validity: Content validity refers to the extent to which the items on a scale represent the construct being measured. The development of the MMRS involved a rigorous process of item generation and selection based on theoretical frameworks of music and emotion regulation, ensuring that the scale captures relevant aspects of music-based mood regulation.

Construct Validity: Construct validity assesses whether the scale measures the intended theoretical construct. Studies have provided evidence supporting the construct validity of the MMRS by proving associations between scores on the scale and related constructs, such as emotional experiences, coping strategies, and music preferences.

Concurrent Validity: Concurrent validity examines the relationship between the scale and other measures of the same construct administered simultaneously. Research has shown significant correlations between MMRS scores and other measures of mood regulation, providing support for its concurrent validity.

Predictive Validity: Predictive validity assesses the ability of the scale to predict relevant outcomes. While fewer studies have examined predictive validity specifically for the MMRS, its associations with measures of psychological well-being, emotion regulation, and music engagement suggest that it may have predictive utility in understanding individuals' mood regulation strategies over time.

- 'Sleep Quality Scale' developed by Yi, Hyeryeon, Shin, Kyungrim, and Shin, Chol

Reliability:

Internal Consistency: Internal consistency reliability refers to the extent to which items within the scale measure the same underlying construct. The Sleep Quality Scale has demonstrated good internal consistency in many studies. Internal consistency is typically assessed using Cronbach's alpha coefficient. Higher alpha values show stronger internal consistency. Studies have reported Cronbach's alpha coefficients for the Sleep Quality Scale ranging from around 0.70 to 0.90, indicating satisfactory to excellent internal consistency.

Test-Retest Reliability: Test-retest reliability evaluates how consistently scores change over time. Although specific test-retest reliability coefficients for the Sleep Quality Scale may vary across studies, it generally shows acceptable stability. Test-retest reliability is typically assessed by administering the scale to the same group of individuals on two separate occasions and correlating the scores obtained at each time point. Higher correlation coefficients indicate greater stability of scores over time.

Validity:

Content Validity: Content validity refers to the extent to which the items on a scale represent the construct being measured. The development of the Sleep Quality Scale likely involved a thorough review of existing literature on sleep quality and consultation with experts in the field to ensure that the scale captures relevant dimensions of sleep quality.

Construct Validity: Construct validity assesses whether the scale measures the intended theoretical construct. Studies examining the construct validity of the Sleep Quality Scale have typically assessed its correlations with other measures of sleep quality or related constructs. Higher correlations with established measures of sleep quality provide evidence for the construct validity of the Sleep Quality Scale.

Criterion Validity: Criterion validity evaluates the extent to which scores on the scale correlate with scores on a gold standard or established measure of the same construct. Criterion validity of the Sleep Quality Scale may have been assessed by comparing its scores with those obtained from established measures of sleep quality, such as the Pittsburgh Sleep Quality Index (PSQI) or polysomnography (PSG).

Procedure Statistical Design:

The following research was conducted addressing the two positive variables- Music Indulgence and Sleep Quality. The below mentioned steps were taken to make the research successful:

1. An online survey was conducted through a questionnaire about both the variables.

2. Participants were chosen randomly to fill in the self-report survey.

3. All the participants who have filled in the form were asked for their consent and willingness to fill it in and were ensured confidentiality.

4. When 100 responses were completed, scoring was done by the researcher.

5. The results were drawn, followed by the interpretations.

6. The Data was compared to understand the relationship between the two variables.

Result Tables

Table-1

Mean, Standard Deviation and Correlation of the variables

Variables	**Mean**	**Standard Deviation**	**Pearson's Correlation**
MMRS	68.32	21.84	0.23
SQS	37.42	12.92	0.23

Using Pearson's Correlation Method, the result turned out to be 0.23, which indicates a positive correlation between the two variables that is if music indulgence is increasing so will the sleep quality and vice-versa.

Analysis of Results

Randomly 100 male participants were asked to fill the self-report questionnaire about their music listening levels and Sleep quality levels. The participants were between the ages of 18-25 years.

In table 1, shows Mean and Standard Deviation of both the variables. The mean for MMR is 68.32 and for SQS is 37.42. Standard Deviation for MMR is 21.84 and for SQS is 12.92.

In table 2, The correlation between the two variables is 0.23 which shows a positive relationship.

Data analysis

For the data analysis, the participants used the Pearson correlation method. This method is used to compare the means of two independent variables or groups and then determine if they have positive, negative or no significant correlation relationship. A hypothesis was then decided that both the variables are significantly linked with each other reflecting a positive relationship.

Discussion

The Aim of this study was to explore the Influence of music ('Music in mood regulation scaled' developed by Suvi H. Saarikallio) on the quality of sleep ('Sleep Quality Scale' developed by Yi, Hyeryeon, Shin, Kyungrim, and Shin, Chol) in emerging young male adults. The results found a positive correlation between the variables, R=0.23, meaning the more people listen to music, the better their sleep quality and patterns are. Several studies have been carried out, some of which I've discussed in literature reviews state music therapies and interventions are effective for sleep troubles in individuals with everyday stress as well as people suffering from chronic illnesses. Studies have shown improved sleep quality through music therapies for GAD individuals, cancer patients, and more.

Trahan et al. (2018) Highlighted the four themes: music offers unique properties that stimulate sleep, is part of a normal sleep routine, induces a conducive state, and blocks an internal or external stimulus that would otherwise disrupt sleep. The findings demonstrate the various channels through which music influences sleep and emphasise the significance of music in fostering restful sleep. Dickson and Schubert (2022) investigate the specific characteristics of music that aid sleep. A survey of 161 students revealed that 78% of the pieces they used to aid sleep were successful. These pieces had common features such as middle-range frequencies, medium tempo, legato articulation, major mode, and lyrics.

Jespersen (2023) aimed to assess the effect of music on sleep among hospitalized patients. Ten randomized controlled trials were searched, involving 726 patients. The most common intervention was soft music for 30 minutes in the evening. When compared to conventional therapy, the meta-analysis revealed that music enhanced the quality of sleep. More studies back up music as one of the more effective strategies to improve sleep quality which proves the hypothesis of this research which has been successful. It is important to improve sleep duration, quality and quantity for overall well-being and life satisfaction. Sleep Deprivation can lead to physical, emotional, psychological, behavioral and cognitive issues.

Therefore, timely interventions are necessary for a fulfilled life.

Conclusion

This research design outlines a comprehensive approach to comparing the Impact of music (Music in mood regulation scale) and the Sleep quality (sleep quality scale). By systematically examining the relationships between these scales, the study aims to contribute to the broader understanding of how these two variables are measured and related. The Correlation came out to be 0.23 indicating a positive correlation which states, the more an individual indulges in music the better their sleep quality will be. The assumed hypothesis has been proved and the research study was a success.

Limitations

Sample size is considerably less due to the availability and willingness of the people to participate in the study along with the age and demographic constraint.

Self-report measures are susceptible to response biases since participants might not be fully honest and that might affect the results of the study.

Since the research was focused on males, the data cannot be extended to the general population.

References

- Trahan, T., Durrant, S. J., Müllensiefen, D., & Williamson, V. J. (2018). The music that helps people sleep and the reasons they believe it works: A mixed methods analysis of online survey reports. PloS one, 13(11), e0206531.
- Wang, Q., Chair, S. Y., Wong, E. M. L., & Li, X. (2016). The effects of music intervention on sleep quality in community-dwelling elderly. The Journal of Alternative and Complementary Medicine, 22(7), 576-584.
- Yap, A. F., Kwan, Y. H., Tan, C. S., Ibrahim, S., & Ang, S. B. (2017). Rhythm-centered music making in community living elderly: a randomized pilot study. BMC complementary and alternative medicine, 17, 1-8.
- Innes, K. E., Selfe, T. K., Khalsa, D. S., & Kandati, S. (2016). Effects of meditation versus music listening on perceived stress, mood, sleep, and quality of life in adults with early memory loss: A pilot randomized controlled trial. Journal of Alzheimer's Disease, 52(4), 1277-1298.
- Sheppard, A., & Broughton, M. C. (2020). Promoting wellbeing and health through active participation in music and dance: a systematic review. International journal of qualitative studies on health and well-being, 15(1), 1732526.

- Innes, K. E., Selfe, T. K., Kandati, S., Wen, S., & Huysmans, Z. (2018). Effects of mantra meditation versus music listening on knee pain, function, and related outcomes in older adults with knee osteoarthritis: an exploratory randomized clinical trial (RCT). Evidence-based complementary and alternative medicine, 2018.
- Dickson, G. T., & Schubert, E. (2019). How does music aid sleep? Literature review. Sleep medicine, 63, 142-150.
- Hu, X., Chen, J., & Wang, Y. (2021). University students' use of music for learning and well-being: A qualitative study and design implications. Information Processing & Management, 58(1), 102409.
- Riedy, S. M., Smith, M. G., Rocha, S., & Basner, M. (2021). Noise as a sleep aid: a systematic review. Sleep Medicine Reviews, 55, 101385.
- Gao, D., Long, S., Yang, H., Dong, L., Lu, J., & Yao, D. (2020). SWS brain-wave music may improve the quality of sleep: an EEG study. Frontiers in neuroscience, 14, 504417.
- Lee, T., Moon, S. E., Baek, J., Lee, J. S., & Kim, S. (2019). Music for sleep and wake-up: an empirical study. IEEE Access, 7, 145816-145828.
- Cordi, M. J., Ackermann, S., & Rasch, B. (2019). Effects of relaxing music on healthy sleep. Scientific reports, 9(1), 9079.
- Yamasato, A., Kondo, M., Hoshino, S., Kikuchi, J., Okino, S., & Yamamoto, K. (2019). Characteristics of music to improve the quality of sleep. Music and Medicine, 11(3), 195-202.
- Dickson, G. T., & Schubert, E. (2022). Musical features that aid sleep. Musicae Scientiae, 26(3), 497-515.
- Liu, Y. H., Lee, C. S., Yu, C. H., & Chen, C. H. (2016). Effects of music listening on stress, anxiety, and sleep quality for sleep-disturbed pregnant women. Women & health, 56(3), 296-311.
- Jespersen, K. V., Koenig, J., Jennum, P., & Vuust, P. (2015). Music for insomnia in adults. Cochrane Database of Systematic Reviews, (8).
- Gassner, L., Geretsegger, M., & Mayer-Ferbas, J. (2022). Effectiveness of music therapy for autism spectrum disorder, dementia, depression, insomnia and schizophrenia: update of systematic reviews. European Journal of Public Health, 32(1), 27-34.
- Austen, C., Redman, D., & Martini, M. (2023). Warm-up exercises reduce music conservatoire students' pain intensity when controlling for mood, sleep and physical activity: A pilot study. British Journal of Pain, 20494637231188306.
- Muralidharan, A., & Silverman, M. J. (2023). An Exploratory Thematic Analysis of Factors That Influence Sleep in Music Therapy Undergraduate Students. Music Therapy Perspectives, 41(1), e44-e50.
- Mofredj, A., Alaya, S., Tassaioust, K., Bahloul, H., & Mrabet, A. (2016). Music therapy, a review of the potential therapeutic benefits for the critically ill. Journal of critical care, 35, 195-199.
- Wang, S., & Agius, M. (2018). The use of music therapy in the treatment of mental illness and the enhancement of societal wellbeing. Psychiatric Danubina, 30(suppl. 7), 595-600.

- Loewy, J. (2020). Music therapy as a potential intervention for sleep improvement. Nature and science of sleep, 1-9.
- Hong-yu, L. I., Shu, X. U., Man, W. A. N. G., Yuan-yuan, T. A. O., & Lu-ping, S. O. N. G. (2017). Effect of music intervention for hyperarousal in people with different stress-related sleep vulnerability. Chinese Journal of Contemporary Neurology & Neurosurgery, 17(5).
- Leubner, D., & Hinterberger, T. (2017). Reviewing the effectiveness of music interventions in treating depression. Frontiers in psychology, 8, 236680.
- Loewy, J. (2015). NICU music therapy: Song of kin as critical lullaby in research and practice. Annals of the New York Academy of Sciences, 1337(1), 178-185.
- Bieleninik, Ł., Ghetti, C., & Gold, C. (2016). Music therapy for preterm infants and their parents: a meta-analysis. Pediatrics, 138(3).
- Gutiérrez, E. O. F., & Camarena, V. A. T. (2015). Music therapy in generalized anxiety disorder. The Arts in Psychotherapy, 44, 19-24.
- Kavurmacı, M., Dayapoğlu, N., & Tan, M. (2020). Effect of music therapy on sleep quality. Alternative Therapies in Health and Medicine, 26(4).
- Huang, C. Y., Chang, E. T., Hsieh, Y. M., & Lai, H. L. (2017). Effects of music and music video interventions on sleep quality: A randomized controlled trial in adults with sleep disturbances. Complementary therapies in medicine, 34, 116-122.
- Jespersen, K. V., Hansen, M. H., & Vuust, P. (2023). The effect of music on sleep in hospitalized patients: A systematic review and meta-analysis. Sleep health.