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## Effects of Regular and Irregular Music Exposure on Stress Level and Emotional Regulation among Young Adults

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### KEYWORDS

### ABSTRACT:

The aim of this comparative study is to investigate the impact of regular and irregular music exposure on emotional regulation and stress levels among young adults aged 18 to 30 in Delhi and its surrounding areas. Music's potential as a non-pharmacological intervention for Emotional Regulation and stress inspired this study. We surveyed 505 participants, including 380 regular music listeners and 125 irregular music listeners, using standardized questionnaires for emotional regulation and perceived stress. Statistical analyses, including t-tests, were conducted. The hypothesis, that regular music listeners would exhibit better emotional regulation, was strongly supported by the data. Regular music engagement was associated with significantly improved emotional control. The next hypothesis, suggesting that regular music listeners would experience lower stress levels, also received strong support. Frequent music listeners had markedly lower stress levels, indicating music's effectiveness as a stress-reduction strategy when integrated into daily routines. These findings emphasize the therapeutic and psychological benefits of music for young adults, promoting emotional control and stress reduction. Music can be valuable in therapeutic, educational, and workplace settings, contributing to emotional regulation and mental health. This study enhances our understanding of music's impact on emotional regulation and stress reduction in young individuals, highlighting its profound influence on their inner journeys.

### INTRODUCTION

Music's ability to excite and modify emotions is widely recognised. It has a great influence on our state of mind by means of music, songs, beats, rhythms, or words. As an outcome, it is an efficient method of regulating emotions and reducing stress. Researchers discovered that consuming preferred music can boost dopamine and other neurological chemicals linked to pleasure and satisfaction, enhance mood, and reduce stress.

The connection between emotion and music is profoundly ingrained in our brain structure. Many regions of the brain are stimulated by music, including the amygdala (which handles emotional processes), the hippocampus (which governs memory), and the prefrontal cortex (which controls decision-making and emotion management).

The following are some of the ways music may benefit.-

- Emotional regulation: Music's emotional influence extends past stimulation; it also aids in their management. Humans can utilise music to alter their state of mind by selecting a song that corresponds to their intended mood.
- Music's melodic and structural components can relate to physiological processes such as heartbeat and breathing. This synchronisation might make you feel more at ease.
- Sharing memories and feelings: Music has the uncanny capacity to elicit feelings and recollections. Listening to pleasant and familiar music might help reduce stress by sparking memories and evoking feelings of warmth.



Stress has become an essential factor of concern in the present-day fast-paced and stressful world, hurting both the physical and mental well-being of individuals. Stress management is essential for living a healthy and active way of life. One method is to use music to ease tension. Music's impact on feelings and its involvement in emotional regulation has piqued the curiosity of researchers as well as practitioners. This research digs into the intricate interplay between emotional regulation, music, and stress, and shows how music may be utilised to help with stress management.

Emotional regulation refers to the methods through which individuals monitor, analyse, and process their emotional reactions to diverse situations. It is critical to evaluate how individuals react to obstacles. Mental evaluation, insight, and persuasion are all functional emotion management mechanisms. Stress levels grow as emotional systems fail, resulting in severe psychological and physical repercussions. Music has a huge impact on the way people feel and can help to relieve stress and increase emotional control. This connection between music, stress, and emotional regulation is widely documented and may be explained by a number of mechanisms:

- **Resonance Emotional:** Music may trigger a wide range of emotions. When we listen to music, our brains typically respond by generating neurotransmitters associated with joy and mood control, such as dopamine and serotonin. Different types of music may elicit different emotions, allowing individuals to choose music that fits to their current state of mind or desired mood.
- **Distraction and Relaxation:** Music can provide an escape from external stresses. When we are listening to music, our minds are less likely to dwell on causes of anxiety and worry. Slow, soothing music may help people deal with stress more effectively by lowering muscular tension and slowing heart rate.
- **Biological processes:** Music has the capacity to sync with our biological functions, such as the rhythm of our hearts and respiration. Music that fits the tempo and structure of our own internal biological processes can create a calming atmosphere and reduce tension. Slow-tempo music with a calming

sound, for example, might be analogous to a relaxed respiratory rate.

- **Emotional Expression:** Music allows individuals to express and manage their emotions. People commonly use music to express feelings that are difficult to express verbally. This outpouring of sentiments may be relaxing, supporting people in managing their emotions and lowering stress by recognising and releasing trapped sensations.
- **Neurological Effects:** Music stimulates various brain regions, notably those associated with emotion processing and regulation. Music is used therapeutically to help patients suffering from psychological conditions, trauma, or stress-related ailments. Endorphins, which are recognised as natural mood enhancers, can be activated.
- **Personalized playlist:** Creating a tailored playlist of beloved music or tunes that have a soothing or pleasant effect might be a useful tool for emotional regulation. When people want emotional assistance, they can turn back to music
- **Meditation & Mindfulness:** Music may be utilised to support meditation and mindfulness practises. Using peaceful music alongside meditation practices can help people stay in the now, reduce anxiety, and increase emotional control.

It's important to remember that every person's musical tastes vary, so what works for one person could not work for another. People ought to be willing to experiment with different sorts, rhythms, and forms of music so as to gain the benefits of stress management and emotional regulation provided by music. Music's potential to enhance emotional well-being makes it a versatile and accessible tool for stress reduction and emotional regulation, whether it's classical music, natural noises, or upbeat pop tunes.

### **Rationale**

Music is a powerful tool for regulating emotions and managing mental states. In India, a country rich in diverse musical traditions, music has a profound impact on mental well-being. It can validate and transform emotions, making it a valuable tool for coping with stress. Classical music, specifically through practices like naad yog , has



therapeutic benefits for those dealing with mental stress. Music serves as a partner in our inner journeys, shaping emotions and offering solace from life's challenges. It provides peace, empowerment, and insight into the complexity of human emotions.

- The reason I chose this area of study was because it would allow me to investigate how music might assist individuals in overcoming their psychological issues in a non-pharmacological manner, that is, without the use of medications.
- Although there have been some previous studies on the advantages of music on emotional regulation and stress reduction, there still exists a lot of data that needs to be examined, leaving plenty of room for future study.
- By shedding light on the positive effects of music on emotional regulation, this study can assist in strengthening the emotional support system while promoting healthier coping techniques.

## REVIEW OF LITERATURE

(Looti, 2022) proposed that music and emotion research tries to comprehend the cognitive link that exists among people and music. It is a part of music psychology that studies the nature of feelings in response to music, whether listener traits influence which feelings are felt, and what elements of a piece of music or performance evoke certain reactions. The topic relies on and has major consequences for philosophy, musicology, music theory, aesthetics, and musical composition and performance.

(Chec M;Ligocka M;Janik I;Samochowiec J;Samochowiec A;2019) Research claimed that music plays a crucial part in all people's lives, particularly the young person's emotional sense of reality. The purpose of the research was to identify the role of mood as an intermediate in the manner in which music impacts the emotional perception of visual cues in teenagers. The research project attempted to clarify the connection between intangible elements such as mood, music, and teenagers' emotional perception of visual pictures. Despite methodological challenges, this association was established.

(Moreno Jr, 2022) Proposed a study with the purpose to determine whether listening to and playing music helps reduce stress during the epidemic. Qualitative as well as quantitative information were gathered to demonstrate how music impacted morale and lowered stress in the school's homeroom and music classrooms. Findings from the data demonstrated a pattern of a general feeling of enjoyment when performing music.

(Saarikallio et al., 2019) says the current study sought to determine if music listening effects teenagers' perceived agency in regular life and what contextual factors may account for such an impact. Our results supported the flexibility and contextual integration of agency. Music can undoubtedly support agency, but its effectiveness is reliant on a variety of contextual circumstances. Sense of agency may be viewed as a health resource and an important aspect of child development, and this research provides new insight into when and under what situations such amenities are likely to be used.

(Linnemann, Wenzel, & Grammes, 2017) Examined that despite mounting evidence that music listening in everyday life reduces stress, the majority of research on music listening depend on subjective, retroactive data. As a result, the temporal patterns underpinning music listening's stress-reduction impact remain unknown. As a result, we sought to investigate the temporal dynamics of the correlations between stress and music listening by evaluating both objective and subjective information on music in everyday life.

(Carvalho, 2022) The aim of the study is music is speculated to assist in the adoption of emotional regulation techniques such as distractions or reappraisal, although empirical investigations have yielded inconclusive outcomes. However, the moderating influence of music on a person as well as abilities in executive functioning has not yet been examined. Furthermore, little is understood about how music works. We induced anger in a set of individuals with high musical expertise and executive functioning in the current investigation. We asked participants to manage their feelings and assessed their ability to do so. Participants were divided into a total of four groups based on their regulation method (distraction vs. reappraisal) and music preference (with vs. without). Music had an influence on



those with higher musical sophistication, but not on those with lower musical sophistication. Music benefited from reconsideration in the former but was a poor diversion in the latter. Working memory and affective flexibility, two separate executive abilities, exhibited opposing effects: greater, but not lower, working memory participants benefitted from music; lower, but not higher, effective adaptability individuals benefited from music. Subjective experience reports showed that music promotes more empathetic reappraisals, which may be more lasting. Our findings validate the hypothesis that music impacts vary based on listener characteristics, and they generate fresh theories about the uniqueness of music-assisted emotional regulation

## RESEARCH METHODOLOGY

**Aim:** The aim of this study is to investigate the effects of regular and irregular music exposure on emotional regulation and stress levels.

### Objectives

To evaluate the difference between regular and irregular music listeners in relation to stress levels among young adults.

To examine the difference between regular and irregular music listeners in relation to emotional regulation among young adults.

### Hypotheses

The following hypotheses are formulated for the study

**H2:** Regular music listeners will have lower stress levels as compared to irregular music listeners among young adults.

**H1:** Regular music listeners will have higher emotional regulation as compared to irregular music listeners among young adults.

### Sample and Its Selection

To get a sample, a purposive sampling strategy was used. You use the Purposive Sampling Method to find individuals of the overall population who are likely to have specific features or experiences (and are open to discussing them with you). In this approach, you may focus on the sample while selecting individuals or instances that match your study. The sample included 505 people aged 18 to 30 years old, with 380 stating that they listen to music on a daily basis and that music soothes

them and 125 indicating they don't listen to music on a regular basis. This sample included young folks from Delhi and its surroundings.

### Research Design

This research uses a comparative research design, this study method is frequently used to investigate the impact of one or more independent factors on a number of dependent variables across diverse groups or situations. This research involves systematic analysis of Stress and Emotional Regulation on the basis of regular and irregular music listening by young adults. The research will evaluate the effects of music listening on stress and emotional regulation of young adults.

**Survey Design:** The process of establishing a structured collection of questions and responses to gather information as well as data from a group of persons or entities is known as survey design. Surveys are a popular research approach in a variety of subjects. A well-designed survey is essential for gathering trustworthy and useful data. The survey firstly consist of demographic details that are name, age, gender etc, then the survey proceeds with the main question, that is does the respondent listen to music regularly and does it comfort the respondent or not.

Secondly, the survey is derived from 2 research tools that are emotional regulation questionnaire and the perceived stress scale. The study focused on individuals aged 18 to 30 years and followed manual guidelines for scoring. Statistical tools were then used to investigate the influence of both regular and irregular music exposure on the emotional regulation and stress levels of young adults.

### Description of Tools Employed

Dr. Sheldon Cohen developed the **Perceived Stress Scale (PSS)** in 1983, and it is a commonly used psychological measure. It is intended to examine how stressful people estimate their lives to be. The PSS is an instrument for self-report that assesses stress in general rather than particular stressors.

The **Emotional Regulation Questionnaire (ERQ)** was created by James J. Gross and Oliver P. John as a psychological diagnostic instrument. A 10-item scale that assesses the respondents' capacity to manage their emotions in two ways: (1) cognitive reappraisal and (2) expressive suppression. Each item is graded on a 7-point



Likert scale that ranges from 1 (strongly disagree) to 7 (strongly agree). It is intended to assess an individual's ability to manage their emotion.

**Procedure**

The research uses the purposive sampling method. First, the prospective participants who were between the age group and 18 to 30 years were approached. Consent was taken and then the participants were provided with the demographic questions they were asked. The main question of the survey was “Does music comfort you and do you listen to music regularly? Which helped in the identification of the participants as regular or irregular music listeners. Some participants were unsure about

some questions which were clarified by the researcher so that some genuine and legible data could be collected. After the classification, standardized questionnaires were presented to the participants which were used to measure Stress Level or Emotional Regulation. After the survey was filled data was collected and organised into tables which were later converted into usable form for performing the required tests which were performed using the IBM SPSS software. An Independent sampling t-test was used to compare the data of regular and irregular music listeners by comparing the means of both groups. A t-test was also used to check if there are significant differences in the data of the two groups.

**RESULT AND ANALYSIS**

**TABLE 1: Socio-Demographic Details of Participants**

| Age   | Regular Music Listener | Irregular Music Listener | Total |
|-------|------------------------|--------------------------|-------|
| 18-30 | 380                    | 125                      | 505   |

Table 1. Depicts the socio- demographic details of the participants chosen for the study. The research has been done on young adults ranging from 18 - 30 years among which 380 participants are regular music listeners and

125 irregular music listeners. Summing up the both groups of our study the total number of music listeners are 505.

**TABLE 2: Difference in Mean and Standard Deviation of Regular and Irregular Music Listeners**

| Variables            | Group                    | N   | Mean  | SD    |
|----------------------|--------------------------|-----|-------|-------|
| Stress Level         | Regular Music Listener   | 380 | 19.53 | 6.383 |
|                      | Irregular Music Listener | 125 | 28.16 | 5.776 |
| Emotional Regulation | Regular Music Listener   | 380 | 52.24 | 9.226 |
|                      | Irregular Music Listener | 125 | 32.34 | 9.575 |

Table 2 highlights the mean and standard deviation among regular music listeners and irregular music listeners for the taken variables i.e. Stress level and

Emotional regulation. The stress level mean for regular music listeners is 19.53 and for irregular music listeners is 28.16 which indicates that regular music listeners have



lower stress levels as compared to irregular music listeners. The emotional regulation mean for regular

music listeners is 52.24 which indicates higher emotional regulation as compared to irregular music listeners 32.34.

**TABLE 3: t-test table of Stress Level**

| Levene's                   |              |         |         |                 |       |
|----------------------------|--------------|---------|---------|-----------------|-------|
|                            | Significance | t value | df      | Mean difference | p     |
| Equal variance assumed     | .174         | -13.409 | 503     | -8.626          | <.001 |
| Equal variance not assumed |              | -14.102 | 231.429 |                 |       |

The above table inspection revealed the homogeneity for independent t-test where the groups are significant at .174 which is greater than the value of significant level .005. The t-value for equal variance assumed is -13.409.

The value for equal variance not assumed is -14.102. Thus indicating the significant difference among both groups where the critical value for t-test is <.001.

**TABLE 4: t-test table of Emotional Regulation**

| Levene's                   |              |         |         |                 |       |
|----------------------------|--------------|---------|---------|-----------------|-------|
|                            | Significance | t value | df      | Mean difference | P     |
| Equal variance assumed     | .602         | 20.7322 | 503     | 19.909          | <.001 |
| Equal variance not assumed |              | 20.347  | 205.053 |                 |       |

The above table inspection revealed the homogeneity for independent t-test where the groups are significant at .602 which is greater than the value of significant level .005. The t-value for equal variance assumed is 20.732. The value for equal variance not assumed is 20.347. Thus indicating the significant difference among both groups where the critical value for t-test is <.001.

## DISCUSSION

The data reported in the tables provide significant insight into the association involving young people's music listening patterns and two major psychological variables, stress level and emotional regulation. We will go into the ramifications of these discoveries and their possible relevance in the discussion chapter.

The above analysis of data depicts the socio-demographic details of the participants chosen for the study. The

research has been done on young adults ranging from 18 - 30 years among which 380 participants are regular music listeners and 125 irregular music listeners. Summing up both groups of our study the total number of music listeners is 505.

Results also led to discovering significant variations in stress levels and emotional regulation compared to regular and irregular music listeners when we examined the data. Regular music listeners had a significantly lower average stress level of 19.53, whereas irregular music listeners had a significantly greater average stress level of 28.16. This shows that those who listen to music on a regular basis have lower stress levels than those who do so infrequently. Furthermore, when it came to emotional regulation, frequent music listeners had a significantly greater mean score of 52.24, indicating a stronger level of





emotional regulation. In this regard, irregular music listeners obtained a much lower average score of 32.34.

According to the t-test table data for stress, the homogeneity evaluation for the independent t-test generated a significance level of .174. This number exceeds the specified significance level of .005, suggesting a significant difference across the groups that are being compared. Furthermore, with equal variances assumed, the estimated t-value was -13.409. Even when the premise of equal variances was violated, the t-value remained remarkably high at -14.102. These high t-values strongly imply a substantial difference across both of the groups under consideration. Indeed, the critical value for the t-test was set at less than .001, emphasising the extremely significant character of the observed difference. Also the "Mean Difference" is -8.626, which means that, on average, regular music listeners have a stress level (or emotional regulation score) that is approximately 8.626 units lower than that of irregular music listeners.

Similarly, when the data in the t-test table for emotional regulation was examined, we saw that the statistical homogeneity assessment for the independent t-test provided a significance level of .602. This number exceeds the specified significance level of .005, suggesting that there is a substantial difference between the groups under consideration. Furthermore, when equal variances were assumed, the computed t-value was 20.732. Even though the assumption that there were equal variances was not maintained, the t-value remained very high at 20.347. This high t-value strongly implies that there is a substantial difference across the two groups under consideration. Indeed, the critical value for the t-test was discovered to be less than .001, corroborating the notion that the difference that was observed is highly significant. Also the "Mean Difference" is 19.909, which means that, on average, regular music listeners have an emotional regulation score that is approximately 19.909 units higher than that of irregular music listeners.

### Hypotheses Testing

This study's assumptions concentrate around the possible influence of music listening habits on young adults' emotional regulation and stress levels. According to the first hypothesis, "**Regular music listeners will have lower stress levels compared to irregular music**

**listeners among young adults."** The study's statistics substantially support this idea, since the mean stress level for regular music listeners (19.53) was much lower than that for irregular music listeners (28.16). This significant mean difference of 19.909 provides statistical evidence for the idea that regular music listening is related to lower stress levels in young people.

According to the second hypothesis, "**Regular music listeners will have higher emotional regulation compared to irregular music listeners among young adults."** This assumption is supported by empirical facts since the study's findings show that frequent music listeners had a much higher mean score for emotional control (52.24) than irregular music listeners (32.34). The significant mean difference of 19.909 emphasises this point, giving strong empirical proof that habitual music listeners have improved emotional control abilities.

Taken together, the outcomes of this study support both the hypotheses, indicating that regular music listening is associated with improved emotional regulation and decreased stress levels in young people. These findings have significant implications for the potential therapeutic and psychological advantages of incorporating music listening into stress management and emotional regulation measures for this population. At last, I would say that this research is successful in proving both hypotheses.

### CONCLUSION

The significance of music listening among young people has emerged as a key subject of interest and investigation in the constantly evolving field of emotional regulation and stress management. The findings of this study give interesting insights into the association between music listening habits and this demographic's emotional regulation and stress levels.

The first hypothesis, "Regular music listeners will have lower stress levels compared to irregular music listeners among young adults," received strong support from our data. The average stress level of frequent music listeners was much lower than that of irregular music listeners. This study shows that including music in one's everyday routine might be an effective stress-reduction therapy.

Our second hypothesis, "Regular music listeners will have higher emotional regulation compared to irregular music



listeners among young adults," was validated by empirical evidence. Regular music listeners had a significantly higher mean score for emotional control, suggesting that regular music engagement promotes improved emotional regulation.

These findings emphasise the therapeutic and psychological effects of listening to music for young adults. Music is a potent instrument for fostering emotional control and stress reduction, especially when practiced on a regular basis. These findings might have far-reaching implications in therapeutic settings, education, and the workplace, where music could be used to improve emotional control and general mental health. This study is an important step towards recognising music's diverse contributions to the study of Emotional Regulation and Stress. It emphasises the value of music listening, preventative mental health treatments, and tailored well-being interventions. As we continue to learn more about the complex link between music and mental health, our findings highlight the importance of music in supporting emotional regulation and stress reduction in young people.

## LIMITATION

While the study provides valuable insights into the relationship between music listening habits and psychological well-being among young adults, it is essential to acknowledge its limitations.

Firstly there is sampling Bias which means the study primarily focused on a specific age group (18-30 years), which may limit the generalizability of the findings to other age groups. Different age cohorts may have distinct music preferences and stressors, which can impact the results. Secondly, the study relies on self-report measures for variables like stress levels and emotional regulation. Self-report data can be influenced by social desirability bias and individual subjectivity, potentially leading to measurement inaccuracies. Also, the research employed a cross-sectional design, capturing data at a single point in time. Longitudinal studies could provide a more comprehensive understanding of how music listening habits influence emotional regulation and stress levels over time. The study does not delve into the specific music preferences of participants. Different music genres

and styles may have varying effects on emotional well-being, and not accounting for these preferences is a limitation. The study did not assess the duration and intensity of music-listening sessions. Understanding how these factors might influence emotional well-being could provide a more nuanced perspective on the relationship.

## RECOMMENDATIONS

Based on the findings and limitations of the research on the relationship between music listening habits and emotional well-being among young adults, the following recommendations can be made:

Future research should employ longitudinal designs to explore how music listening habits impact emotional regulation and stress levels over time. This approach will help establish causality and better understand the long-term effects of music engagement on well-being. The new research should focus on expanding the study's scope to include a more diverse range of age groups and demographics will provide a comprehensive understanding of how music affects individuals across various life stages and cultural backgrounds. Also investigating the impact of different music genres and styles on emotional well-being should help in understanding how specific types of music influence stress reduction and emotional regulation will help tailor interventions to individual preferences. Conducting controlled experiments to test the causal relationships between music listening and emotional well-being will help in the formation of a better research paper these experiments can manipulate variables to determine the precise mechanisms through which music affects well-being.

Investigate how cultural factors influence the relationship between music and well-being. Cultural variations in music preferences and meanings may have significant implications for therapeutic interventions. Also investigate the interplay between music engagement and other factors that influence emotional well-being, such as social support, access to mental health resources, and life events. Understanding these interactions will contribute to a more nuanced analysis.





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