

A Study On The Relationship Between Music Preferences And Emotional Regulation Among Indian College Students

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Abstract

This study investigates the relationship between music preferences and emotional regulation among college students, with a focus on gender differences. Emotional regulation is crucial for managing the various stressors that college students face, such as academic pressures and social adjustments. Music, known for its therapeutic effects, plays a significant role in emotional regulation by influencing mood and reducing stress. This research employs Spearman's rho correlation to explore the association between music preference and emotional regulation, revealing a moderate positive correlation. This is relevant in developing intervention strategies for this particularly vulnerable age group.

Keywords: Emotional regulation, music preferences, college students, music therapy, stress management, mental health

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I. Introduction

Significance of emotional regulation

The ability to control your emotions is a skill used throughout life and it impacts relationships, academic progress, and overall happiness. Emotional control is necessary for getting along with others, solving problems peacefully, and having successful interactions. Controlling emotions is vital for having good relationships with family, friends, and romantic partners. It helps people explain themselves, understand others and value their points of view (Gómez et al., 2014). Controlling emotions is very important because it affects your ability to do well in school and work. Both topics need mental control. Researchers have found that people who can handle their feelings better do better in school, get better faster, and deal with stress better. However, having trouble controlling your emotions could make it harder to think, make choices based on your values, and do well in school or work. Emotional regulation is a critical psychological process that involves managing and responding to one's emotions in a way that is adaptive and beneficial. For college students, emotional regulation is particularly significant due to the unique and often intense emotional experiences associated with this life stage. During college, students encounter a range of challenges that can impact their emotional well-being, including academic stress, social adjustment, and mental health issues.

One of the most prevalent sources of stress among college students is academic pressure. The transition from high school to college often brings increased responsibilities, higher expectations, and a more demanding workload. Students must manage multiple assignments, exams, and projects, which can lead to feelings of anxiety, overwhelm, and burnout. The pressure to maintain high academic performance and the fear of failure can exacerbate these stressors. Effective emotional regulation strategies, such as cognitive restructuring and mindfulness, can help students manage academic stress by promoting a more balanced perspective and reducing the impact of stress on their emotional state. Recognizing the importance of emotional regulation, many colleges and universities are incorporating support systems and interventions to assist students. Counselling services, stress management workshops, and peer support programs are examples of resources available to help students develop effective emotional regulation skills. Additionally, programs that integrate mindfulness, cognitive-behavioural techniques, and emotional intelligence training can provide students with practical tools to manage their emotions and navigate the challenges of college life.

Role of music in psychology

Music functions as a significant stress reliever and emotional release mechanism. Research has shown that engaging with music can lower levels of the stress hormone cortisol, thereby reducing stress and promoting relaxation (Sun et al., 2019). Listening to soothing music or participating in music-making activities can help

individuals manage anxiety, enhance mood, and provide a sense of emotional release. This therapeutic effect is particularly valuable in coping with challenging emotions that are difficult to articulate, offering a non-verbal outlet for expression and processing. As a tool for emotional regulation and social bonding, music continues to be an invaluable aspect of human life, offering both personal and collective benefits that enhance emotional health and foster meaningful connections. Because technology has improved, it is now easier for people to find and enjoy music. As digital music apps and streaming services have become more common, music that was once hard to get is now available. People can expand their musical and cultural tastes thanks to readily available tools for finding new songs (Latwal & Babita, 2023). Thoma et al (2013) demonstrated that listening to relaxing music reduced cortisol levels and improved mood in individuals experiencing acute stress. Similarly, a review by Bradt and Dileo (2014) highlighted that music interventions were effective in reducing anxiety and improving relaxation in various clinical populations. Music therapy's effectiveness is also evident in its application across different settings, including hospitals, mental health clinics, and educational environments. A brief review of literature shows numerous links between music and emotional regulation. Research by He (2018) has shown that audio recordings of music can be a useful tool for reducing stress and its many negative effects among college students. There are a lot of stresses that affect young people's health throughout late adolescence because it is a developmentally difficult time between childhood and maturity (Habe et al, 2023). According to reports, music is one of the most effective techniques for promoting well-being, Upadhyay et al (2013) intricacies the role of music engagement in peoples everyday life and how the experience of music was related to resilient coping. Music therapy is suggested as a solution to the social adaptation issues that first-year college students have as it is believed to enhance social adaptability, namely interpersonal engagement, and decrease negative mechanisms (Xinyi et al., 2023). Researchers from both psychology and neuroscience have come up with theories that explain how music affects our feelings and thoughts in a more complete way. They show the many ways that music changes people's thoughts, feelings, and actions by focusing on the complicated connection between music, the nerve system, and the body. In a nutshell, music is essential to human psychology and society because it is a universal language for sharing feelings and thoughts and getting in touch with others (Wang & Huang, 2024). Theoretical approaches from psychology and neuroscience help us understand the mental and biological processes that make music affect our emotions.

II. Methodology

Aim

To study the relationship between music preferences and emotional regulation among Indian college students.

Objectives

1. To assess level of music preference among Indian college students.
2. To assess level of emotional regulation among Indian college students.
3. To assess the relationship between music and emotional regulation among Indian college students.
4. To assess gender differences in emotional regulation among Indian college student
5. To assess the level of emotion regulation across different education levels among Indian college students.

Hypotheses

H0: There is no significant relationship between music preferences and emotional regulation among Indian college students.

H1: There is a significant relationship between music preferences and emotional regulation among Indian college students.

H2: There is a significant gender difference in emotional regulation among Indian college students.

H3: There is a significant difference across education levels in emotional regulation among Indian college students.

Operational Definitions

Music Preference: Music preference refers to the individual's personal tastes and choices in music genres, styles, and artists. It reflects the specific types of music that a person enjoys and feels connected to. One notable publication that explores the concept of music preference is Rentfrow, P. J., & Gosling, S. D. (2003)

Emotional Regulation: Emotional regulation is the process by which individuals influence their own emotional experience, including how they feel, express, and manage their emotions. Emotional regulation refers to the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions (Gross, 2003) This concept encompasses both conscious strategies, like cognitive reappraisal, and automatic responses, like physiological changes, aimed at maintaining emotional balance and adapting to various situations.

Variables

Independent Variable: Music Preference, Age, Gender

Dependent Variable: Emotion Regulation

III. Results And Discussion

H1: There is a significant relationship between music preferences and emotional regulation among Indian college students.

Table 1- Spearman’s rank Order Correlation for analysis of relationship between Emotion Regulation and Music Preference

	n	df	p (rho)	p
Emotion Regulation	201	199	0.374	0.000
Music Preference	201	199	0.374	0.000

The Spearman’s rank correlation analysis in TABLE 1 reveals a moderate positive relationship between music preference and emotional regulation among college students, with a correlation coefficient of 0.374. This coefficient suggests a moderate level of association between the two variables, indicating that students who have a stronger preference for certain types of music generally exhibit better emotional regulation abilities. This suggests that while music preference can contribute to emotional regulation, it is not the sole factor influencing it. Hence, there is a significant relationship between music preferences and emotional regulation among Indian college students. Therefore, the hypothesis H1 is accepted.

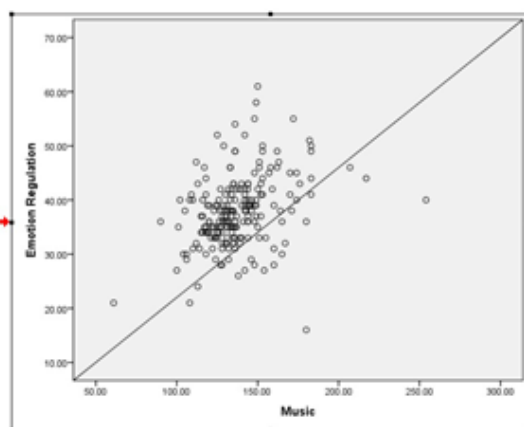


Figure 1- Scatter plot distribution of Emotion regulation and Music Preference

From fig 1, it can be observed that the data points lie almost on or around a straight line or slope. Hence it can be inferred that the variables emotion regulation and music preference have potential correlation.

H2: There is a significant gender difference in emotional regulation among Indian college students.

Table 2 - T-test scores for emotion regulation across gender

	Female		Male		t	p
	M	SD	M	SD		
Emotion Regulation	36.75	6.32	39.27	6.84	-2.71	0.007

The T-test results in TABLE 2 present a comparison of emotional regulation scores between female and male college students. The descriptive statistics reveal that female students (N=102) have a mean emotional regulation score of 36.7549. In contrast, male students (N=99) exhibit a higher mean score of 39.2727 and a standard deviation of 6.84794. The observed difference in mean scores between genders points to a potential variation in how males and females regulate their emotions. Males tend to score higher on emotional regulation, indicating they might employ more effective strategies or have different emotional coping mechanisms compared to females. The higher standard deviation for males suggests a greater variability in their emotional regulation scores, which may reflect a wider range of emotional responses and coping strategies within this group. Hence, there is a significant difference across gender in music preferences among Indian college students. Therefore, the alternate hypothesis (H2) is accepted.

H0: There is no significant difference across education levels in emotional regulation among Indian college students.

H3: There is a significant difference across education levels in emotional regulation among Indian college students.

Table 3 - Levene's test on homogeneity of variance across educational levels on emotion regulation

LEVENE STATISTIC	DF1	DF2	SIG.
2.316	2	198	.101

The Levene's test for equality of variances examines whether the variances in emotional regulation scores are equal across the different educational groups: PUC, Undergraduate, and Postgraduate students. The Levene's statistic value is 2.316, with degrees of freedom (DF1) of 2 and degrees of freedom (DF2) of 198. The significance level (SIG) of this test is 0.101 as seen in TABLE 3.

Table 4 - Descriptive Statistics for age, gender, and education level across music preference and emotion regulation among Indian college students.

Variables	Mean (n=10)	Median (n=10)	Mode (n=10)	SD (n=10)
Age	2.73	3.00	3	1.01
Gender	1.49	1.00	1	0.501
Education level	2.23	2.00	2	0.72
Emotion Regulation	37.99	38.00	35	6.68
Music Preference	137.75	135.00	144	21.94

TABLE 2 shows Emotion Regulation mean score is 37.9950 with a standard error of 0.47182. For Music, the mean score is 137.7512 with a standard error of 1.54778. Overall, these statistics reveal that while emotional regulation scores are relatively stable with moderate variability, music preferences exhibit greater variability and a tendency toward higher values.

Table 5 - Normality Test of the variables

Variable (n=10)	Kolmogorov-Smirnov Test			Shapiro-Wilk Test			Skewness	Kurtosis
	Statistic	df	p	Statistic	df	p		
Emotion Regulation	0.079	200	0.04	0.982	200	0.10	0.321	1.100
Music Preference	0.094	200	0.000	0.931	200	0.00	1.093	4.667

**p<.01

TABLE 5 shows Emotion Regulation, Kolmogorov-Smirnov test statistic is 0.079 with a significance level of 0.004, indicating that the distribution of emotion regulation scores significantly deviates from a normal distribution at the 0.05 level. Similarly, the Shapiro-Wilk test yields a statistic of 0.982 with a significance level of 0.010. For Music, the Kolmogorov-Smirnov test statistic is 0.094 with a significance level of 0.000, and the Shapiro-Wilk test statistic is 0.931 with a significance level of 0.000. In summary, both variables exhibit significant deviations from normality, as evidenced by the Kolmogorov-Smirnov and Shapiro-Wilk tests.

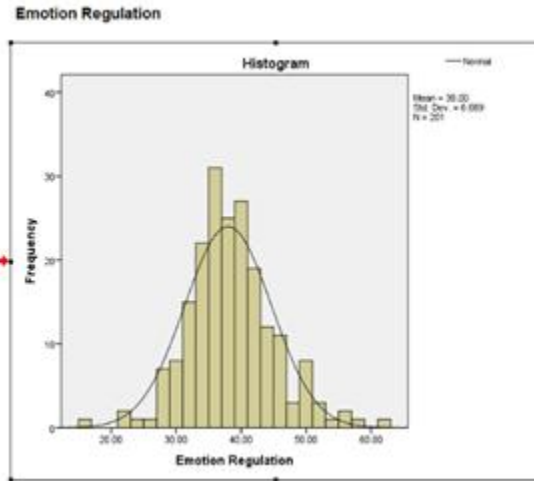


Figure 2 - Histogram visualising the distribution of Emotion Regulation for Normality Testing

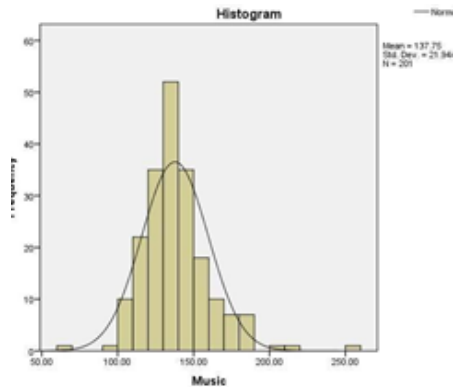


Figure 3 - Histogram visualising the distribution of Music Preference for Normality Testing

Table 6 - ANOVA Test across educational levels in emotion regulation

	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	79.460	2	39.730	.887	.414
WITHIN GROUPS	8869.535	198	44.796		
TOTAL	8948.995	200			

The ANOVA results for emotional regulation provide insight into whether there are significant differences in emotional regulation scores among the three educational groups of Pre-University, Undergraduate, and Postgraduate students. In summary, the ANOVA results in TABLE 6 indicate that educational level does not significantly affect emotional regulation scores among the students. Thus, the hypothesis that there are differences in emotional regulation based on educational background is not supported by the data. This finding suggests that emotional regulation may be influenced by factors other than educational level, or that the differences in emotional regulation across these educational groups are not substantial enough to be detected with this dataset.

Table 7 - Tukey HSD to explore the differences in emotional regulation scores among the three educational groups

(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval (Lower Bound)	95% Confidence Interval (Upper Bound)
PUC	Undergraduate	1.80575	1.35588	.379	-1.3961	5.0076
PUC	Postgraduate	1.30646	1.36768	.606	-1.9233	4.5362
Undergraduate	PUC	-1.80575	1.35588	.379	-5.0076	1.3961
Undergraduate	Postgraduate	-.49928	1.03630	.880	-2.9465	1.9479
Postgraduate	PUC	-1.30646	1.36768	.606	-4.5362	1.9233
Postgraduate	Undergraduate	.49928	1.03630	.880	-1.9479	2.9465

The Tukey HSD (Honestly Significant Difference) test was conducted to further explore the differences in emotional regulation scores among the three educational groups of Pre university, Undergraduate, and Postgraduate students. Overall, the Tukey HSD results in TABLE 7 indicate that there are no significant differences in emotional regulation scores between any of the educational groups. All mean differences are not statistically significant, as evidenced by the p-values being greater than the alpha level of 0.05 and the confidence intervals including zero. This implies that, according to the data, educational level does not have a significant effect on emotional regulation across PUC, Undergraduate, and Postgraduate students. Hence, there is no significant difference across education levels in emotional regulation among Indian college students. Therefore, the null hypothesis is accepted.

The objective of this study was to investigate the relationship between music preferences and emotional regulation among Indian college students. For the purpose of evaluating these connections, the investigation utilizes a number of statistical techniques, such as the Spearman's rho correlation, T-tests, and analysis of variance and correlation. The findings of this study are consistent with the current body of research that provides evidence in favour of the concept that music can play a positive function in the management of emotional states. Previous research has demonstrated that music can have therapeutic effects, including the alleviation of stress and the improvement of mood (Thoma et al., 2013; Garrido & Schubert, 2011). These claims are supported by the modest association that was discovered in this study, which also implies that a college student's liking for music may be a statistically significant predictor of their ability to regulate their emotions.

Hence, there is a significant relationship between music preferences and emotional regulation among Indian college students. In terms of gender differences, the findings of the T-test showed that there is a considerable difference between males and females in terms of their ability to regulate their emotions. More specifically, males exhibited stronger levels of emotional control in comparison to females, indicating that males, on an average, are better able to control their feelings than females within the group under consideration. Several research that highlight gender variations in emotional processing and regulation demonstrate that this conclusion is compatible with those findings. As an illustration, research has shown that males and females may experience and display emotions differently, which may have an effect on how they regulate their emotions (Chordia, Godfrey & Rae, 2008).

The purpose of the exploratory analysis of variance (ANOVA) results was to investigate the influence of educational level on emotional regulation. The F-statistic, which was not significant ($F = 0.887$, $p = 0.414$), demonstrated that the analysis did not uncover any significant changes in the way individuals regulate their emotions across the various levels of schooling. Because of this conclusion, it appears that educational background does not have a major effect on the control of emotions within the setting of this study. The implication is that other factors, in addition to educational degree, might be more influential in creating the ability to regulate emotions.

In general, the results of this research shed light on the beneficial connection that exists between the way one prefers to listen to music and the way one regulates their emotions. This suggests that music has the potential to be an effective tool for improving one's emotional well-being. The amount of schooling did not appear to have a major impact on emotional control, despite the fact that there were considerable gender disparities in regard to emotional regulation. These discoveries contribute to our understanding of how certain music tastes can influence emotional regulation, and they highlight the necessity of conducting future study to investigate the mechanisms that lie beneath these associations, as well as additional elements that may have an impact on your emotional state.

IV. Conclusion

The strong correlation between the findings of this study and previous research has demonstrated the crucial impact that music plays in altering emotional states. The existence of this association lends credence to the notion that those who engage with music on a deeper level tend to enjoy much improved emotional control. The gender difference that was found in this study, in which males demonstrated higher levels of emotional regulation compared to females is consistent with some literature that investigates gender-based variations in an individual's ability to understand and regulate their emotions. It is possible that males and females adopt different strategies for the regulation of their emotions.

According to the findings of this study, there were no significant changes in the ability to regulate emotions across different levels of education. This suggests that educational background may not be the key factor in determining emotional regulation abilities. The implication is that other factors, such as personal experiences, social support, or individual characteristics, may play a more significant influence in determining how one regulates their emotions.

The findings of this study highlight the significance of taking into account individual characteristics as well as contextual factors while doing research on emotional regulation. This shows that music can be a useful

tool for persons who are looking to improve their emotional well-being. The major role that music preference plays in increasing emotional regulation suggests that music can be valuable. On the other hand, the fact that educational degree does not have a major impact indicates that there is a requirement for providing a more comprehensive perspective on the components that influence emotional regulation. It is possible to have a better understanding of how to utilize music and other contextual aspects to boost emotional well-being and broaden the area of research.

In order to improve emotional regulation among college students, educators, and mental health professionals, the findings of this study present a number of crucial practical implications that come with them. It is possible that incorporating music into various elements of everyday life can be an effective method for regulating emotions and lowering stress. This is because there is a positive association between how much music one enjoys and how well one is able to regulate their emotions. The incorporation of music into everyday routines can serve as a helpful coping tool for college students who are experiencing difficulty coping with the responsibilities of academic life. It is common for students to experience tremendous stress as a result of the coursework, examinations, and social pressures they confront. The findings of the study indicate that actively engaging with music may be able to assist in mitigating the effects of these stressors and improving emotional regulation. In light of this, it is beneficial for students to incorporate music into their study sessions, periods of relaxation, or activities that they engage in recreationally. Listening to music while studying or during breaks can help create an atmosphere that is calm, which has the potential to improve both academic performance and emotional well-being. Academic institutions could take into consideration the possibility of conducting music therapy sessions that are open to students. It is possible to organize these sessions in such a way that they efficiently target certain emotional difficulties, such as anxiety or depression, and offer students with the tools necessary to effectively regulate their feelings. Additionally, clinicians working in the field of mental health can reap the benefits of these findings by incorporating tailored music treatments into their current therapy procedures. By adapting music-based therapies to the preferences of each individual, it is possible to increase the efficiency of these interventions in regulating emotions. It is possible to incorporate music into therapy sessions, to employ music as a method of self-care, or to promote music as a practice that is complementary to more conventional therapeutic methods. It is possible for teachers to utilize music in a variety of ways in order to establish a constructive and interesting atmosphere in the classroom. As an illustration, playing music in the background during particular activities or transitions can increase both concentration and mood. An additional benefit of adding music into classroom activities, such as group projects or creative tasks, is that it can encourage students to work together and express their feelings. In general, the practical implications of this study show that music may play a substantial role in promoting emotional regulation for individuals at the college level, as well as for educators and professionals working in the field of mental health. Individuals can take advantage of the emotional benefits of music by incorporating it into their daily routines, educational settings, and therapeutic activities. Future research should aim to explore the differential effects of music genres, examine demographic variations, uncover underlying mechanisms, assess therapeutic potentials, and consider individual differences. Such comprehensive investigations will contribute to the development of targeted interventions and strategies that leverage music for enhancing emotional well-being and managing stress.

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