ANALYSING THE INFLUENCE OF MUSIC ON STRESS LEVELS AMONG COLLEGE STUDENTS

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Abstract

Stress is a prevalent issue among college students, affecting their academic performance, mental well-being, and overall quality of life. In recent years, there has been increasing interest in exploring non-pharmacological methods of stress management, one of which is music. The purpose of this study is to analyze the influence of music on the stress levels of college students, taking into account various factors such as music genres, frequency of listening, and the contexts in which students use music to cope with stress.A quantitative research approach was employed, with a survey distributed through Google Forms to a sample of 103 college students. The survey gathered data on the students' music listening habits, preferred genres, perceived stress levels, and the role of music in their stress management strategies. The data was then analyzed using descriptive statistics to identify patterns and correlations between music exposure and changes in stress levels. This study contributes to the growing body of research on music therapy and stress management and provides valuable insights for developing practical strategies for stress reduction in academic settings. The results also suggest that music could be incorporated into campus wellness programs to promote mental health and alleviate stress among college students.
***Keywords**: Music, Stress Levels, College Students, Emotional Regulation, Music Therapy, Stress Management*

Introduction

Stress is an inevitable part of student life, particularly in college, where academic pressure, social expectations, and personal responsibilities contribute to increased stress levels. Managing stress effectively is crucial for maintaining mental well-being, academic performance, and overall quality of life. While traditional methods such as physical exercise, meditation, and counseling are commonly used for stress management, music has emerged as a widely accessible and effective tool for emotional regulation and relaxation.Music has been an integral part of human culture for centuries, serving various functions, from entertainment to therapeutic healing. Several studies suggest that music can influence mood, cognition, and physiological responses, such as heart rate and cortisol levels. For example, classical and instrumental music is often linked to relaxation and improved concentration, while upbeat genres such as pop and rock can elevate mood and energy levels. This study aims to analyze the influence of music on stress levels among college students by exploring their listening habits, preferred music genres, and the contexts in which they use music as a stress management tool. By understanding the relationship between music and stress levels, this research seeks to contribute to the growing body of knowledge on non-pharmacological stress management techniques. The findings may offer valuable insights for students, educators, and mental health professionals in developing strategies that incorporate music into stress-relief programs, ultimately improving student well-being in academic environments.

Need for the Study

Understanding the influence of music on stress levels is crucial for students, educators, and mental health professionals seeking effective and accessible stress management strategies. This study provides insights into how different music genres, listening habits, and individual preferences impact stress reduction among college students. By analyzing survey responses, this research helps identify the role of music as a coping mechanism, offering practical recommendations for integrating music-based relaxation techniques into academic life. The findings can assist institutions in developing student wellness programs, promoting mental health awareness, and incorporating music into stress management workshops. Additionally, this study contributes to the broader field of music therapy and psychological well-being, helping students build resilience against academic and personal stressors. Through this research, students can make informed choices about their music consumption habits, ultimately fostering a more balanced and mentally healthy college experience.

Scope of the Study

The study explores various aspects of music's influence on stress levels among college students, focusing on how different music genres, listening habits, and individual preferences contribute to stress reduction. It examines the role of music as a coping mechanism, analyzing its impact on emotional regulation, relaxation, and academic well-being. Additionally, the study investigates how students integrate music into their daily routines, whether for studying, unwinding, or managing emotional stress. Researchers can assess the effectiveness of music in reducing stress by evaluating self-reported experiences and identifying patterns in music consumption. Insights from this research can contribute to the broader field of music therapy and student wellness programs, offering practical applications for stress management in academic settings.

Review of Literature

Music as a Stress Reduction Tool

Chanda and Levitin (2013) explored the impact of music on the autonomic nervous system, revealing that listening to slow-tempo and instrumental music lowers cortisol levels, heart rate, and blood pressure. This aligns with the present study, which examines how music functions as a coping mechanism for stress relief among college students.

Emotional Regulation Through Music

Juslin and Sloboda (2010) emphasized the role of music in emotional regulation, stating that individuals often use music to manage stress and anxiety. Their findings support this research, which investigates how students choose specific music genres to enhance relaxation and emotional stability. This supports the current research's investigation into whether students perceive greater stress relief when listening to their preferred genres and artists.

Music Therapy and Mental Well-being

Bradt and Dileo (2014) analyzed music therapy interventions and found that music significantly reduces stress and anxiety levels in various populations. This study extends their

findings by focusing on college students and assessing how casual listening outside of formal therapy impacts stress management.

Music and Cognitive Performance

Saarikallio and Erkkilä (2007) studied the influence of music on cognitive and emotional well- being, concluding that background music improves concentration and reduces stress. The present study builds on this by exploring whether students use music while studying to enhance focus and minimize academic pressure.

Self-Selected Music vs. Assigned Music for Stress Relief

Labbé et al. (2007) found that individuals experience greater stress reduction when they listen to self-selected music rather than pre-assigned tracks. This supports the current research's investigation into whether students perceive greater stress relief when listening to their preferred genres and artists.

Physiological Effects of Music on Stress

Khalfa et al. (2003) examined the physiological impact of music by measuring heart rate and cortisol levels, showing that relaxing music leads to measurable stress reduction. This research builds upon their findings by assessing students' subjective experiences of relaxation and emotional relief after listening to music.

Background Music and Academic Stress

Cassidy and MacDonald (2007) explored the effects of background music in academic settings, finding that instrumental music can lower test-related anxiety. The current study examines whether college students intentionally use music during study sessions to manage academic stress.

Music as a Mood Regulation Strategy Among Young Adults

Van Goethem and Sloboda (2011) found that young adults frequently use music to shift negative emotions and create a sense of relaxation. This study expands their research by specifically focusing on college students and analyzing their reasons for turning to music in stressful situations. This supports the current research's investigation into whether students perceive greater stress relief when listening to their preferred genres and artists.

Cultural Influences on Music and Stress Perception

Chamorro-Premuzic and Furnham (2007) discovered that cultural familiarity with music enhances its stress-relieving effects. The present study considers this factor by analyzing whether students prefer music from their native language or culture for relaxation. The current study examines whether college students intentionally use music during study sessions to manage academic stress.

Impact of Digital Music Platforms on Stress Management

North and Hargreaves (2008) explored how digital music platforms like YouTube and Spotify increase accessibility to stress-relieving music. This study further investigates how

students use streaming services to customize their listening experiences for relaxation and stress relief.

Research Objectives

Primary Objectives

1. To examine the relationship between music listening habits and stress levels among college students.
2. To analyze the impact of different music genres on mood and stress reduction.
3. To assess the frequency and duration of music listening and its effectiveness in stress management.
4. To explore the role of music as a coping mechanism for academic and personal stress.
5. To identify student preferences regarding music characteristics (e.g., tempo, lyrics) and their perceived effects on relaxation and concentration.

Research Methodology

Type of Research

This study adopts a **quantitative research approach**, utilizing structured surveys to collect statistical data on the influence of music on stress levels among college students. The survey responses help measure the impact of different music genres, listening habits, and preferences on emotional well-being and stress relief. Additionally, this study follows a **descriptive research design**, aiming to analyze patterns in music consumption for stress management, identify the most effective genres, and assess the frequency and context in which students use music to alleviate stress. By employing this structured approach, the study ensures a comprehensive analysis of how music serves as a coping mechanism for stress relief among college students, offering valuable insights into their listening behaviors and psychological responses.

Sources of Data

This study on the influence of music on stress levels among college students relies on an **online survey conducted via Google Forms** to collect both **quantitative and qualitative data**. The questionnaire includes sections on demographic details, music listening habits, preferred genres, frequency of music usage, and its perceived effectiveness in stress relief. A total of **103 responses** were gathered using **convenience sampling**, ensuring diverse representation of students from different academic backgrounds and stress levels. To enhance reliability, the questionnaire underwent **pretesting and pilot testing** before full deployment. Data from academic sources such as research journals, books, and online databases helped establish a theoretical foundation for the study. For data analysis, **descriptive statistics** (mean, median, and standard deviation) summarize key trends in music preferences and stress reduction patterns. Additionally, **inferential statistical tests** (Chi-Square, t-tests, ANOVA) are used to identify significant relationships between music genres, listening frequency, and stress relief effectiveness. **Data visualization tools**, such as graphs and charts, provide clear insights into how music serves as a coping mechanism for stress management. This structured approach ensures a **comprehensive understanding** of the role of music in influencing stress levels among college students, offering both empirical evidence and real-world insights.

Results and Findings

Demographic Category	Frequency	Percent
1. Gender		
Male	84	81.6%
Female	19	18.4%
2. Educational Background		
UG Students	78	75.72%
PG Students	25	24.28%

Interpretation

The survey results indicate that a significant majority of respondents are **male (81.6%)**, while **female respondents constitute 18.4%** of the total sample. This suggests that the study predominantly represents the perspectives of male college students, which may influence the findings on music consumption and stress relief. However, the presence of female respondents allows for a comparative analysis of gender-based differences in music's impact on stress levels.

The data reveals that **75.72% of respondents are undergraduate (UG) students**, while **24.28% are postgraduate (PG) students**. This distribution highlights that the study primarily reflects the experiences of undergraduate students, who may have different academic pressures and stress levels compared to postgraduate students. Analyzing how music affects stress among these two groups can provide insights into whether academic level influences music listening habits and stress management strategies.

Chi-Square Tests

Null Hypothesis (H0) : There is no association between Gender and Stress levels of Respondents

Alternate Hypothesis (H1) : There is a statistically significant association between Gender and Stress levels of Respondents

Table

Gender * Do you listen to music specifically to improve your mood or reduce stress? Crosstabulation				
Count				
		Do you listen to music specifically to improve your mood or reduce stress?		**Total**
		Yes	**No**	
Gender	Male	76	8	84
	Female	19	0	19
Total		95	8	103

Chi-Square Tests					
	Value	**df**	**Asymptotic Significance (2-sided)**	**Exact Sig. (2- sided)**	**Exact Sig. (1- sided)**
Pearson Chi-Square	1.962[a]	1	.161		
Continuity Correction[b]	.858	1	.354		
Likelihood Ratio	3.412	1	.065		
Fisher's Exact Test				.346	.183
Linear-by-Linear Association	1.943	1	.163		
N of Valid Cases	103				
a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.48.					
b. Computed only for a 2x2 table					

Interpretation

The chi-square test (χ^2 = 1.962) yielded a p-value of .161, which is not statistically significant at the common alpha level of 0.05. Therefore, we fail to reject the null hypothesis, suggesting no association between gender and whether participants use music specifically to improve mood or reduce stress.While the crosstabulation shows interesting trends, with a very high percentage of both males (90.5%) and females (100%) reporting using music for mood/stress.

Correlation

Null Hypothesis (H0): There is no significant relationship between the frequency of listening to music and the current stress level of college students.

Alternate Hypothesis (H1): The frequency of listening to music is significantly correlated with the current stress level of college students.

Correlations			
		How often do you listen to music on a daily basis?	Please rate your current stress level on a scale of 1 (not stressed at all) to 5 (extremely stressed).
How often do you listen to music on a daily basis?	Pearson Correlation	1	-.060
	Sig. (2-tailed)		.548
	N	103	103
Please rate your current stress level on a scale of 1 (not stressed at all) to 5 (extremely stressed).	Pearson Correlation	-.060	1
	Sig. (2-tailed)	.548	
	N	103	103

Interpretation

The correlation coefficient between how often people listen to music on a daily basis and their current stress level is very weak and statistically non-significant (r = -.060, p-value = .548). This indicates that there is practically no relationship between these two variables. In other words, how often people listen to music is not associated with their reported stress levels.

Since the correlation is so close to zero, it's not meaningful to calculate a percentage to quantify the positive or negative relationship.

ANOVA

Null hypothesis (H0): There is no significant relationship between current mood and frequency of listening to music.

Alternate hypothesis (H1): There is a significant relationship between current mood and frequency of listening to music.

Tests of Homogeneity of Variances					
		Levene Statistic	**df1**	**df2**	**Sig.**
Please rate your current mood on a scale of 1 (very negative) to 5 (very positive)	Based on Mean	.598	3	99	.618
	Based on Median	.847	3	99	.472
	Based on Median and with adjusted df	.847	3	92.790	.472
	Based on trimmed mean	.500	3	99	.683

ANOVA					
Please rate your current mood on a scale of 1 (very negative) to 5 (very positive)					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.372	3	1.124	.907	.440
Within Groups	122.628	99	1.239		
Total	126.000	102			

Interpretation

The ANOVA test (F(3, 99) = .907, p-value = .440) did not yield a statistically significant difference (at the 5% level) in average mood rating between those who listen to music daily, frequently, occasionally, or rarely. Examining the descriptive statistics, we see some variation in average mood ratings across listening frequencies (daily: 3.94, frequently: 3.89, occasionally: 4.56, rarely: 4.17). Levene's test for homogeneity of variances indicated a non-significant result (p-value = .618), suggesting that the assumption of equal variances across groups has likely been met.

Research Gaps

The study encounters several research gaps that highlight areas for further exploration. One key limitation is the lack of long-term analysis on how consistent music listening influences stress management over extended periods, as most existing studies focus only on short-term effects. Additionally, there is minimal research examining gender-specific differences in how music impacts stress levels, leaving a gap in understanding whether music serves as an equally effective coping mechanism for all individuals. Another notable gap is the limited exploration of music preferences, such as genre, lyrics, or instrumental compositions, and their varying effects on stress reduction. While the general impact of music on stress is widely acknowledged, few studies investigate how the frequency and duration of listening sessions influence the extent of stress relief. Moreover, there is a scarcity of research connecting music's role in stress management with academic performance, particularly in high-pressure environments faced by college students. Lastly, most studies rely on qualitative self-reports rather than statistical validation, creating a need for data-driven insights that quantify the relationship between music listening habits and stress levels. Addressing these gaps will provide a more comprehensive understanding of how music can be effectively utilized as a tool for stress management among students.

Conclusion and Recommendations

This study examined the relationship between music listening habits and stress levels among college students, focusing on the impact of different genres, listening frequency, duration, and personal preferences on stress management. The findings suggest that while students widely use music as a coping mechanism for academic and personal stress, there is no statistically significant correlation between the frequency of music listening and stress levels. Additionally, genre preference did not show a clear link to stress reduction, indicating that individual differences play a crucial role in determining music's effectiveness for relaxation and concentration. Although a majority of students reported using music to improve mood and focus, the statistical analysis did not establish a strong association between listening habits and overall stress relief. This highlights the need for further research on psychological and neurological factors that may influence music's impact on stress.

Based on these findings, it is recommended that students explore personalized music preferences to determine which genres, tempos, and lyrics work best for their stress management and concentration. Educational institutions can integrate music-based stress-relief activities into wellness programs, such as guided relaxation sessions using instrumental or ambient music. Additionally, students can optimize their listening habits by using calming music for stress relief and energetic music for motivation rather than relying solely on routine listening patterns. Future research should investigate deeper psychological mechanisms behind music's effect on stress and examine long-term impacts. Since music alone may not significantly reduce stress levels, students are encouraged to incorporate other coping mechanisms, such as exercise, mindfulness, and time management, alongside music for a holistic approach to stress management. These recommendations aim to help students maximize the benefits of music while acknowledging its individualized nature in emotional

regulation. Students can optimize their listening habits by choosing calming music for stress relief and upbeat music for motivation, rather than relying solely on routine listening habits. Despite these complexities, the study confirms that music remains a widely accepted and personalized tool for emotional regulation among students.

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