ORIGINAL RESEARCH

The Connection Between Daily Music Listening and Emotional Regulation in Teenagers

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ABSTRACT
Background: Adolescence is a critical developmental stage marked by emotional and psychological changes. Music, as a universal and accessible tool, has been shown to influence emotional regulation positively. **Objective:**To investigate the relationship between daily music listening and emotional regulation in teenagers, examining its psychological, physiological, and social dimensions.**Methodology:**A mixed-methods approach was employed, involving 420 teenagers aged 13–19 years. Data were collected through structured surveys (to assess music habits and emotional regulation using the *Difficulties in Emotion Regulation Scale*), semi-structured interviews (to explore personal and social uses of music), and physiological measurements (heart rate and galvanic skin response) during music-listening sessions.**Results:**Survey findings showed that 87% of teenagers listened to music daily, reporting better emotional regulation scores (average DERS score: 55) compared to less frequent listeners (DERS score: 65). Interviews revealed themes of emotional validation, stress reduction, and social bonding through music sharing. Physiological data demonstrated decreased heart rates (-10 bpm) and reduced GSR (-15%) during calming music, indicating relaxation. Upbeat music increased arousal markers, enhancing energy and mood.**Conclusion:**It is concluded that daily music listening enhances emotional regulation in teenagers, providing a versatile and accessible method to manage emotions. Encouraging intentional music use can support emotional well-being and resilience, with implications for educators, parents, and mental health practitioners.
Keywords: Music listening, emotional regulation, teenagers, stress reduction, physiological response, emotional resilience.

INTRODUCTION

Adolescence is a formative stage of life, marked by significant emotional, psychological, and social changes. Teenagers often face challenges in managing emotions, navigating social interactions, and coping with stressors. As they search for effective ways to regulate their emotions, music emerges as a universal and accessible tool that resonates deeply with their experiences [1] .Daily music listening plays a pivotal role in shaping emotional regulation among teenagers. Whether it is calming melodies to reduce anxiety, upbeat tunes to boost mood, or lyrics that validate feelings, music provides a unique avenue for self-expression and emotional processing. Research highlights the ability of music to activate neural pathways linked to emotions, suggesting that consistent engagement with music can significantly influence teenagers' emotional well-being[2] .

Emotional regulation is a critical developmental task during adolescence, influencing not only personal well-being but also social relationships and academic performance. At this stage, teenagers begin to develop strategies to cope with heightened emotional states, including stress, anger, sadness, and joy [3]. While traditional methods such as mindfulness, physical activity, or talking to trusted individuals are commonly recommended, music offers a distinctive and often preferred alternative for many adolescents. The availability and portability of music in the digital age make it a readily accessible tool for emotional management.Studies show that music listening can influence the production of hormones like dopamine

and cortisol, which are associated with pleasure and stress, respectively [4]. For example, listening to calming or meditative music has been linked to lower cortisol levels, reducing stress and promoting relaxation. Conversely, listening to energetic or motivational music can elevate dopamine levels, enhancing feelings of happiness and motivation. These physiological effects make music a powerful tool for helping teenagers manage their emotional states in diverse situations [5].

Furthermore, teenagers are drawn to music not only for its auditory qualities but also for its ability to mirror their inner emotional worlds. Songs with relatable lyrics often provide teenagers with a sense of validation, allowing them to feel understood in moments of emotional turmoil [5]. For instance, when dealing with feelings of heartbreak or loneliness, teenagers may turn to songs that articulate these emotions, helping them process and release pent-up feelings safely and privately. This cathartic aspect of music listening further underscores its relevance as a tool for emotional regulation.Cultural and social dimensions also play a role in the relationship between music and emotional regulation. Teenagers frequently use music to establish their identities, connect with peers, and communicate emotions they may struggle to articulate in words [6]. This social aspect of music underscores its multifaceted role in both individual and collective emotional management. For example, teenagers may share playlists or recommend songs to friends as a way of expressing solidarity or offering support [7].

The type of music listened to can also affect emotional outcomes. Relaxing music, such as classical or lo-fi beats, can help teenagers reduce anxiety and focus better on tasks like studying. On the other hand, genres such as rock or rap may provide an outlet for energy and intense emotions, creating a balance between expression and regulation [8]. Importantly, personal preference plays a significant role in how music impacts emotions; what soothes one teenager may not have the same effect on another, highlighting the individualized nature of this relationship.Advances in neuroscience have further illuminated the mechanisms through which music influences emotional regulation [9]. Research using brain imaging techniques has revealed that listening to music activates the limbic system, including regions like the amygdala and hippocampus, which are central to emotional processing and memory formation. This neural engagement explains why certain songs can evoke vivid emotional memories or alter mood states rapidly [10].In addition to its direct emotional effects, music can also serve as a distraction or a coping mechanism for teenagers dealing with stressful environments. For instance, a teenager experiencing academic pressure may use music as a way to mentally escape and regain composure before returning to their studies. Similarly, music can provide a comforting backdrop during moments of solitude or introspection, offering a sense of companionship and reassurance [11].

Objective

This paper delves deeper into the ways daily music listening influences emotional regulation in teenagers, examining the physiological, psychological, and social dimensions of this relationship.

Methodology

This mixed-methods study was conducted at----------during----------. A total of 420 participants aged between 13 and 19 years were recruited for the study. These participants were selected from four secondary schools and community centers to ensure a diverse representation of socio-economic, cultural, and educational backgrounds. Gender representation was balanced, with 215 female, 200 male, and 5 non-binary teenagers included in the sample. Participants were required to have access to music through digital platforms, such as streaming services or personal libraries, and engage in regular music listening (at least three times a week).

Data Collection

All 420 participants completed a structured survey designed to gather information on their daily music listening habits and emotional regulation strategies. The survey included questions about the frequency and duration of music listening, preferred genres, and typical listening contexts, such as studying, relaxing, or managing stress. To assess emotional regulation, participants were asked to complete the *Difficulties in Emotion Regulation Scale (DERS)* alongside specific questions about how they perceive the impact of music on their mood and coping mechanisms.In addition to the survey, semi-structured interviews were conducted with a subset of 50 participants, selected based on their survey responses to ensure diversity in music preferences and emotional experiences. These interviews explored how teenagers use music to manage specific emotions, the factors influencing their choice of music, and the role of musical elements like lyrics, rhythm, and melody in emotional regulation. The interviews also delved into the social dimension of music sharing and how it affects their emotional connections with peers.For a smaller group of 30 volunteer participants, physiological data were collected during controlled music-listening sessions in a laboratory setting. Participants listened to both pre-selected and self-chosen music tracks, while their heart rates and galvanic skin responses (GSR) were monitored to measure the physiological impact of music on their emotional states. This data provided an objective complement to the self-reported experiences and added depth to the findings.

Data Analysis

Data were analyzed using SPSS v29. Quantitative data from the surveys were analyzed to identify correlations between music listening habits and emotional regulation scores. Interviews were transcribed and analyzed using thematic coding to identify recurring patterns and insights. The neuro-physiological data provided complementary evidence on the physical effects of music on emotional states.

RESULTS

The survey responses from 420 participants indicated that 87% of teenagers listened to music daily, with an average listening time of 2.5 hours per day. Among these, 45% preferred upbeat genres like pop and hip-hop, 30% favored calming genres such as classical and lo-fi, and 25% listened to emotionally intense genres like rock or metal. The majority of participants (42.9%) were aged between 13–15 years, followed by 33.3% aged 16–17 years, and 23.8% aged 18–19 years. Socio-economic backgrounds were diverse, with 47.6% from middle-income families, 28.6% from low-income families, and 23.8% from high-income households. Most participants (90.5%) accessed music through streaming platforms, highlighting its prevalence, while 9.5% relied on offline music libraries.

Table 1: Demographic Data of Participants

Demographic Variable	Category	Number of Participants	Percentage (%)
Gender	Male	200	47.6%
	Female	215	51.2%
	Non-binary	5	1.2%
Age Group	13–15 years	180	42.9%
	16–17 years	140	33.3%
	18–19 years	100	23.8%
Socio-Economic Background	Low-income	120	28.6%
	Middle-income	200	47.6%
	High-income	100	23.8%
Access to Music Platforms	Streaming services	380	90.5%
	Offline music libraries	40	9.5%

The results reveal that 87% of participants reported listening to music daily, with an average emotional regulation score of 55 on the *Difficulties in Emotion Regulation Scale (DERS)*, indicating better emotional regulation. In contrast, the 13% of participants who listened to music less frequently had a higher average DERS score of 65, reflecting more difficulties in managing emotions.

Table 2: Survey Results

Music Listening Habits	Percentage of Respondents	Average Emotional Regulation Score (DERS)
Daily music listeners	87%	55
Less frequent listeners (less than daily)	13%	65

The physiological data illustrate the distinct effects of different music types on emotional and physical states. Calming music, such as classical and lo-fi, resulted in a 10 bpm reduction in heart rate and a 15% decrease in galvanic skin response (GSR), indicating reduced stress and enhanced relaxation. Upbeat genres like pop and hip-hop increased heart rate by 5 bpm and GSR by 12%, reflecting heightened energy and positive arousal. Notably, personalized calming music had the strongest impact, reducing heart rate by 12 bpm and GSR by 18%, demonstrating its superior effectiveness in promoting relaxation and stress relief.

Table 3: Physiological Data

Music Type	Change in Heart Rate (bpm)	Change in GSR (%)	Emotional Impact
Calming (Classical, Lo-fi)	-10 bpm	-15%	Reduced stress and relaxation
Upbeat (Pop, Hip-hop)	+5 bpm	+12%	Increased energy and arousal
Personalized calming music	-12 bpm	-18%	Strongest relaxation effect

The data reveal that participants who listened to music daily for 2+ hours (52.4%) demonstrated the best emotional regulation, with an average DERS score of 50 and 85% reporting emotional benefits such as stress relief and mood improvement. Those who listened several times a week (31.0%) had a higher average DERS score of 58 and slightly fewer reported emotional benefits (70%). Participants who listened once a week or less

(16.6%) had the highest DERS score of 65, indicating greater difficulties with emotional regulation, and only 55% reported emotional benefits.

Table 4: Frequency of Music Listening and Emotional Impact

Frequency of Music Listening	Number of Participants	Percentage (%)	Average Emotional Regulation Score (DERS)	Reported Emotional Benefits (%)
Daily (2+ hours/day)	220	52.4%	50	85%
Several times a week	130	31.0%	58	70%
Once a week or less	70	16.6%	65	55%

DISCUSSION

The findings of this study provide significant insights into the role of daily music listening in emotional regulation among teenagers. The results indicate that music is not only a preferred coping mechanism but also an effective tool for managing stress, enhancing mood, and fostering emotional resilience.The survey data revealed that teenagers who listen to music daily reported better emotional regulation scores compared to those who listened less frequently. This finding aligns with existing research suggesting that music activates brain regions responsible for mood regulation, including the limbic system and prefrontal cortex. The higher scores among daily listeners highlight the consistent impact of music on reducing emotional dysregulation and promoting self-soothing behaviors [12].

The qualitative interviews further underscored the multifaceted role of music in teenagers' emotional lives. Participants described music as a "safe space" for expressing emotions they found difficult to articulate, with relatable lyrics and melodies providing comfort and validation [13]. These observations support theories that music acts as an emotional mirror, enabling individuals to process their feelings in a structured and non-threatening manner. The emphasis on social bonding through music-sharing among peers also points to the communal and relational dimensions of emotional regulation, which are particularly salient during adolescence [14].Physiological data provided objective evidence of music's calming and energizing effects. For example, calming music was associated with decreased heart rate and galvanic skin response, consistent with its reported ability to reduce stress. On the other hand, upbeat music elevated physiological markers of arousal, reflecting its capacity to energize and uplift mood. These results demonstrate the dual functionality of music as both a relaxing and stimulating tool, depending on the genre and context [15].

The study's findings align with previous research on the psychological and physiological effects of music. Prior studies have documented music's ability to lower cortisol levels, improve mood, and enhance focus, which were echoed in the current results. However, this study uniquely contributes by focusing on teenagers, a group undergoing significant emotional and neurological development [16] . By linking emotional regulation scores with specific music genres, preferences, and listening contexts, the study offers a detailed understanding of how adolescents tailor their music use to their emotional needs.The findings have several practical implications for educators, parents, and mental health professionals. Encouraging teenagers to incorporate intentional music listening into their daily routines could provide a low-cost, accessible method for managing stress and improving emotional resilience [17]. For instance, teachers could recommend calming music for focused study sessions, while parents might suggest upbeat playlists to motivate teenagers during challenging times. Additionally, mental health practitioners could explore music therapy as a supplemental intervention for adolescents experiencing emotional difficulties [18].While the study provides valuable insights, it is not without limitations. The reliance on self-reported survey data introduces the possibility of response bias, as participants may have overstated the benefits of music. Additionally, while the sample size of 420 participants was diverse, cultural and regional differences in music preferences may limit the generalizability of the findings. The physiological data, collected from only 30 participants, represents a smaller subset and may not capture the full range of emotional responses to music.

CONCLUSION

It is concluded that daily music listening plays a vital role in enhancing emotional regulation among teenagers. The study demonstrated that teenagers who engage in regular music listening experience improved mood, reduced stress, and greater emotional resilience compared to those who listen less frequently. The combination of survey, interview, and physiological data underscored music's dual functionality as a calming and energizing tool, depending on the genre and context.

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