

Relationship between State-Trait Anxiety and Music Preferences in Young Female Adults

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Abstract

This study examines the relationship between state-trait anxiety and music preferences among young female adults. Anxiety is a significant issue for young women, with music often used as a self-management tool. However, research is limited on how state and trait anxiety are related to the preference for specific subtypes of music in this group. In this study, 80 young women were selected through purposive sampling. They completed the State-Trait Anxiety Inventory (STAI) and the Short Test of Music Preferences (STOMP). Data were analysed in IBM SPSS using Pearson's Correlation and Chi-Square tests to examine the relationship between anxiety levels and specific music genre preferences. Results indicated that participants with higher state anxiety were less likely to prefer genres such as rock, alternative, or heavy metal. These findings can guide more personalized, music-based interventions for anxiety management in young women. This knowledge can contribute to further development of personalized music-based interventions for anxiety reduction and also support the mental health professionals and individuals in selecting effective self-regulation strategies. Ultimately, the study seeks to expand our knowledge about the nuanced interplay between personality, emotional states, and cultural practices, such as listening to music, in the context of anxiety management.

Keywords: State anxiety, trait anxiety, music preferences

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Anxiety, defined by the American Psychological Association (APA) as an emotion characterized by feelings of tension, worried thoughts, and accompanying physiological changes in anticipation of perceived danger (American Psychological Association, n.d.), has become an increasingly important mental health concern among young adults. "State anxiety refers to a transitory emotional state or condition of the human organism characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity. Trait anxiety refers to relatively stable individual differences in anxiety proneness, that is, differences between people in the tendency to perceive stressful situations as dangerous or threatening and to respond to such situations with elevations in the intensity of state anxiety." (Spielberger, 1983)

Studies consistently report that young women experience anxiety more frequently than men because of an interplay of biological, psychological, and sociocultural factors (McLean et al., 2011). Given its impact on emotional well-being, academic functioning, and quality of life, there is growing interest in identifying accessible and non-pharmacological approaches that may help individuals regulate anxiety.

Music has always occupied a meaningful place in human life. Beyond entertainment, it serves as a medium for emotional expression, comfort, and self-regulation. Within the Indian cultural tradition, music has long been associated with emotional and psychological well-being, with different *ragas* traditionally believed to evoke specific emotional states such as calmness, devotion, or motivation Sharma et al. (2021). At the same time, contemporary research demonstrates that people across cultures use a wide variety of musical genres to regulate their emotions, reduce stress, and cope with anxiety (Saarikallio & Erkkilä, 2007; Chin & Rickard, 2014). Since individuals differ considerably in the type of music they enjoy,

limiting the investigation to one form of music alone would not adequately represent the listening habits of today's young adults. Therefore, the present study examines music preferences across different genres rather than focusing on any single musical tradition.

Previous studies have shown that music preferences are influenced by several psychological factors, including personality, emotional state, and coping style (Rentfrow & Gosling, 2003; Greenberg et al., 2016). Research has also indicated that individuals experiencing anxiety often use music intentionally to regulate their emotions, although the genres they choose vary according to their personal preferences and emotional needs (Saarikallio, 2017; Taipale et al., 2024). Despite these findings, relatively few studies have examined how state and trait anxiety are associated with music preferences among young female adults in the Indian context, where cultural influences may shape both emotional experiences and musical choices.

Recent evidence further suggests that anxiety is more prevalent among Indian women than men, highlighting the need to better understand factors that may support emotional well-being in this population. Young women often adapt their music listening according to how they feel. Exploring these patterns may provide useful insights into the role of music as a naturally occurring strategy for emotional regulation and contribute to the expanding field of music psychology.

The present study, therefore, aims to examine whether state and trait anxiety are associated with music preferences among young female adults. Rather than evaluating the therapeutic effects of any particular type of music, the study seeks to understand whether individuals with different types and levels of anxiety demonstrate different musical preferences. By addressing this relationship, the study hopes to contribute to the existing

literature on anxiety and music while providing evidence that may support more individualized approaches to using music as a means of emotional regulation.

Review Of Literature

Anxiety

Definition and Concepts of Anxiety

The World Health Organization (1948) defines health as a state of complete physical, mental, and social well-being rather than merely the absence of disease. Within this framework, anxiety has been recognized as a normal emotional response characterized by feelings of apprehension, tension, and physiological arousal. While mild anxiety can enhance alertness and improve performance in challenging situations, excessive or persistent anxiety may impair psychological well-being and daily functioning (National Institute of Mental Health, 2023). Similarly, the American Psychological Association defines anxiety as an emotional state marked by feelings of tension, worried thoughts, and physiological changes such as increased heart rate and blood pressure (APA Dictionary of Psychology). Spielberger (1983) further distinguished anxiety into state anxiety, which reflects temporary emotional reactions to perceived threats, and trait anxiety, which represents a relatively stable tendency to experience anxiety across situations. This distinction forms an important theoretical basis for understanding individual differences in anxiety.

Prevalence and Correlates of Anxiety

Empirical evidence consistently demonstrates that anxiety is influenced by multiple demographic and psychosocial factors. Gender has emerged as one of the most widely studied correlates, with women generally reporting higher rates of anxiety disorders than

men, particularly specific phobia and agoraphobia (Stewart et al., 1997; Lewinsohn et al., 1998). Research has also highlighted gender-specific patterns of psychiatric comorbidity among individuals with generalized anxiety disorder, indicating that men are more likely to present with alcohol and substance use disorders, whereas women more frequently experience co-occurring mood disorders, excluding bipolar disorder (Lopez et al., 2008). Despite these findings, much of the existing literature has focused on clinical populations, with comparatively limited attention given to non-clinical samples.

Socio-demographic characteristics, including place of residence, age, and socioeconomic status, have also been associated with anxiety. Although several studies suggest that anxiety and mood disorders are more prevalent among urban populations, particularly among women, professionals, and individuals from middle socioeconomic backgrounds, findings remain inconsistent across different settings. Factors such as employment status, quality of life, educational attainment, and healthcare accessibility appear to influence these relationships, indicating that anxiety is shaped by a complex interaction of social and environmental variables (Surya Prabha et al., 2017; Czyczerska et al., 2021; Kasturi et al., 2023). Age-related research similarly suggests that anxiety is more frequently observed among younger individuals, especially college students and adolescents. Social isolation, increasing individualism, financial pressures, and perceived insecurity have been proposed as important contributors to this trend, while anxiety appears comparatively less prevalent among older adults, despite the persistence of certain phobic disorders (Krasucki et al., 1998; Drentea, 2000; Marmorstein, 2007; McLean et al., 2011).

Lifestyle factors have received growing attention in recent years. Evidence indicates that prolonged screen exposure, particularly passive screen use, is associated with elevated

anxiety among adolescents. Excessive screen time has also been linked to disrupted sleep patterns, which may further increase vulnerability to anxiety and related psychological difficulties (Kim et al., 2020; Turner, 2020). Likewise, socioeconomic disadvantage has consistently been associated with a greater risk of anxiety disorders. Individuals from lower socioeconomic backgrounds often experience increased financial stress, reduced access to mental healthcare, and greater exposure to chronic life stressors, all of which contribute to poorer mental health outcomes across the lifespan (German, 2019; Difrancesco et al., 2021).

Collectively, the reviewed literature demonstrates that anxiety is a multidimensional construct influenced by biological, psychological, social, and environmental factors. However, the existing evidence is predominantly derived from Western populations and clinical settings, with comparatively fewer studies examining anxiety among non-clinical young adults within the Indian sociocultural context. Furthermore, while demographic and psychosocial correlates of anxiety have been widely investigated, limited attention has been devoted to understanding anxiety in relation to other behavioral and psychological variables, highlighting the need for further research in this area.

Music

Music and Music Preferences

Music is a universal form of artistic expression that exists across cultures and societies, serving as a medium for emotional expression, communication, and social connection. It comprises elements such as rhythm, melody, and harmony, which may be produced through vocal, instrumental, or electronic means. Beyond its aesthetic value, music has been associated with several psychological and physiological benefits, including improved mood, reduced anxiety, enhanced cognitive functioning, pain reduction, and lower

physiological arousal. Musical traditions vary considerably across cultures; in India, for example, Carnatic, Hindustani, and Odissi music represent major classical systems characterized by intricate rhythmic structures, melodic richness, and spiritual significance (Epperson, 2017).

Music preferences refer to an individual's relatively stable inclination toward particular musical styles or genres. Rentfrow and Gosling (2003) proposed four broad dimensions of musical preference: reflective and complex, intense and rebellious, upbeat and conventional, and energetic and rhythmic. These dimensions encompass a wide range of genres, including classical, jazz, folk, rock, heavy metal, pop, hip-hop, electronic, and soul music, reflecting the diversity of musical experiences across cultures.

A substantial body of research suggests that music preferences are shaped by enduring individual characteristics rather than temporary emotional states alone. Personality traits have consistently been associated with preferred musical styles, with extraversion predicting preferences for energetic and rhythmic music, openness to experience associated with reflective and complex genres, conscientiousness linked to conventional music, agreeableness related to mellow styles, and neuroticism associated with reflective and emotionally expressive music (Rentfrow & Gosling, 2003; Greenberg et al., 2016). Music also serves important psychological functions, including emotion regulation, stress reduction, and energy management. Individuals experiencing anxiety frequently prefer familiar, predictable, and emotionally comforting music while avoiding genres perceived as aggressive, chaotic, or emotionally overwhelming, suggesting that music selection reflects attempts to maintain emotional stability (Chin & Rickard, 2014; Thompson et al., 2016 (Karunanayake et al., 2020).

Demographic variables further contribute to variations in musical preferences. Gender differences have been consistently reported, with females generally showing greater preference for emotionally expressive and mainstream genres such as pop, whereas males more frequently prefer intense and rebellious genres including rock, heavy metal, rap, and hip-hop. These patterns appear to reflect both gender-role socialization and broader cultural influences, while religion and media exposure also contribute to shaping musical tastes (Millar, 2008; Lorenzo et al., 2020). Socioeconomic factors similarly influence musical preferences, although the relationship is complex. Genre preferences have been shown to vary across socioeconomic groups, while broader economic conditions may alter the aspects of music that listeners value, such as lyrics or acoustic qualities. Nevertheless, personality, cultural background, ethnicity, and social environment remain important determinants alongside socioeconomic status (Karunanayake & Palihaderu, 2020; Liu et al., 2024).

Music and Anxiety

Growing evidence supports the therapeutic value of music in promoting emotional well-being and reducing anxiety. Music contributes to psychological adjustment when it is used alongside adaptive emotion-regulation strategies, particularly cognitive reappraisal, whereas maladaptive strategies such as emotional suppression may diminish these benefits (Chin & Rickard, 2014). Neuroscientific findings further indicate that listening to preferred or familiar music activates neural circuits involved in emotional regulation, while singing and musical improvisation enhance emotional processing. In contrast, highly dissonant or complex music may evoke less favourable emotional responses (Moore, 2013).

Empirical studies have consistently demonstrated the effectiveness of music in reducing anxiety across both clinical and non-clinical settings. García González et al. (2018)

reported that music interventions significantly reduced maternal state anxiety during prenatal assessments and were associated with improved childbirth outcomes. Similarly, systematic reviews have shown that both self-selected and therapist-selected music effectively reduce anxiety compared with silence or standard care (Bradt & Dileo, 2013). Group-based music therapy using structured and predictable musical experiences has also been found to reduce anxiety among individuals with dementia, with benefits extending beyond the intervention period (Lee et al., 2012). Furthermore, music combined with auditory beat stimulation has been associated with reductions in both cognitive and somatic anxiety, particularly among individuals with moderate levels of trait anxiety (Saarikallio, 2017).

Overall, the literature indicates that music functions as an important emotional resource, with its psychological benefits depending not only on the type of music but also on individual preferences, personality characteristics, and patterns of emotional regulation. Anxious individuals generally prefer music that is familiar, calming, and emotionally congruent with their coping needs, highlighting the potential role of music preferences in understanding individual differences in anxiety.

Research conducted in the Indian context consistently suggests that Indian classical music has the potential to alleviate anxiety, although the strength of evidence varies across studies. In a randomized clinical trial, Ubrangala et al. (2022) demonstrated that listening to the Indian classical ragas Ahir Bhairav, Kaunsi Kanada, and Bhimpalas significantly reduced both state and trait anxiety among healthy adults, with Raga Kaunsi Kanada producing the greatest improvement. Extending these findings, Sharma et al. (2021) reported that Carnatic music incorporating gradual changes in tempo and octave resulted in lower anxiety levels and favourable electroencephalographic changes associated with relaxation, indicating that

specific musical characteristics may enhance therapeutic outcomes. However, despite these encouraging findings, a systematic review and meta-analysis by Rajendran et al. (2025) concluded that the overall evidence remains inconclusive because of the limited number of high-quality randomized controlled trials and small sample sizes, emphasizing the need for more rigorous research.

Collectively, these studies indicate that while Indian classical music appears to be a promising intervention for anxiety reduction, existing research has primarily focused on structured music-listening interventions rather than examining the relationship between individuals' natural music preferences and anxiety. This highlights a significant gap in the Indian literature and underscores the need for correlational studies exploring music preferences and state-trait anxiety among young adults.

Although previous research has established associations between music preferences, personality, emotion regulation, and anxiety, several limitations remain. First, much of the existing evidence has been generated in Western populations, limiting its applicability to culturally diverse settings such as India, where musical traditions and listening practices differ substantially. Second, relatively few studies have examined the relationship between state and trait anxiety and specific music preferences simultaneously within non-clinical young adult populations. Third, while demographic variables such as gender and socioeconomic status have been studied independently, limited research has explored these relationships specifically among young Indian women. These gaps provide the rationale for the present study, which seeks to examine the association between state-trait anxiety and music preferences among young female adults within the Indian sociocultural context.

Objectives of the Study

1. To examine if there is any significant relationship between state anxiety and music preferences among young female adults.
2. To study the association between trait anxiety and preferred music genres or styles in young female adults.
3. To determine whether there is a significant association between levels of state anxiety and preference for specific musical elements, i.e., lyrics, beats, or both of them, among young female adults.
4. To determine whether there is a significant association between levels of trait anxiety and preference for specific musical elements, i.e., lyrics, beats, or both of them, among young female adults.

Hypotheses:

This is an exploratory study. There is no existing literature relating state-trait anxiety and music preferences. Hence, this study does not hold any hypothesis to prove a correlation between state-trait anxiety and music preferences.

For the Chi-square test of independence,

H_0 : Level of State anxiety and Preference for Different Elements of Music are independent.

H_0 : Level of State anxiety and Preference for Different Elements of Music are dependent.

Methods

While scientific issues cannot and should not be addressed solely through data, data remain crucial in solving scientific problems. In this chapter, the methodology and research design have been outlined under the following sections, viz. research design, sample,

variables under study, tools and instruments for data collection, and procedure of analysing the data

Research Design:

This research was exploratory in nature; that is, it was used to investigate any topic that has limited existing knowledge, and it aims to explore, identify patterns, establish relationships, or get new insights. Exploratory research is quite flexible and often serves as a foundation for future studies. Exploratory studies investigate the topic without any prior hypothesis.

The survey method was utilized to gather the necessary data, serving as a quantitative approach to describe the overall characteristics of a group. This study employs a quantitative correlational design, which is well-suited for exploring the connection between state and trait anxiety and music preferences in young adult women. The correlational method is appropriate in this context, as it enables the assessment of both the strength and direction of the relationship between anxiety levels and musical preferences.

To examine whether there is a significant association between anxiety levels and music preferences for lyrics, beats, or both, a Chi-square test of independence was performed. Anxiety levels were categorised based on the scores obtained from the State Trait Anxiety Inventory, developed by Spielberger et al., 1983. To determine whether participants prefer lyrics/beats/both, a simple survey method was adopted in which they were asked whether they focus on the lyrics, the beats, or both while listening to a song. Chi-square test was chosen as music preference for beat/lyrics/both is a categorical variable.

All the statistical analyses were conducted using IBM SPSS Statistics 20, and the scores were interpreted using the respective manuals of the questionnaires used.

Sample

Purposive sampling technique was adopted to select the sample. A total of 80 participants were included in the study, all of whom were young adult females. This demographic was selected based on literature indicating that young women are particularly susceptible to anxiety. Participation in the study was entirely voluntary, and each participant received comprehensive information about their rights and confidentiality. Informed consent was obtained from all individuals involved. Ethical guidelines were followed throughout the research process.

Inclusion Criteria:

- Female
- 18-25 years old
- Listens to music daily

Exclusion Criteria:

- Male
- More or less than 18-25 years
- Doesn't listen to music

Variables Under Study:

This study investigated the following key variables.

- Anxiety- categorised into state anxiety and trait anxiety
- Music preferences- categorised into reflective and complex, intense and rebellious, upbeat and conventional and energetic and rhythmic music
- Preference for specific musical elements- lyrics, beats or both

Tools and Instruments for Data Collection:

Three primary instruments were used for data collection. They are,

Demographic Profile Questionnaire:

A socio-demographic data sheet was used in order to collect the background or demographic information of the participants like name, age and gender. This helped to categorise and contextualise the participant's data for further analysis.

State-Trait Anxiety Inventory:

The State-Trait Anxiety Inventory (STAI) is a commonly utilized instrument for assessing anxiety in psychological research, developed by Charles Spielberger, R.L. Gorsuch, and R.E. Lushene in 1970. It has a revised form Y, which was published in 1983. It measures two distinct types of anxiety namely, State anxiety (temporary emotional responses to perceived threats) and trait anxiety (stable tendencies to experience anxiety across situations).

Short Test of Music Preferences:

The Short Test of Music Preferences (STOMP) was developed by Peter J. Rentfrow and Samuel D. Gosling in 2003. STOMP is designed to assess individual preferences for various music genres and to explore how these preferences relate to personality traits, self-views, and cognitive abilities.

Procedure

A structured assessment package consisting of a demographic information sheet, the State–Trait Anxiety Inventory (STAI) developed by Spielberger et al., and the Short Test of Music Preferences (STOMP) developed by Gosling et al. was prepared. Prior to data collection, the study received approval from the Institutional Ethics Committee of the concerned institution. The study was conducted in accordance with ethical guidelines, and written informed consent was obtained from each participant before participation.

Data were collected from young female adults studying in various colleges across Odisha using purposive sampling. Participants were informed about the purpose of the study,

the confidentiality of their responses, their right to withdraw at any stage without penalty, and the voluntary nature of participation. No remuneration or incentives were provided.

The demographic sheet collected basic information such as name, age, and gender. The STAI was administered following the standardized instructions for both the State and Trait Anxiety scales. The STOMP was then administered using its standard instructions. As some participants were unfamiliar with certain music genres, examples of Bollywood, Hollywood, and Ollywood songs were provided solely to help them identify the genres accurately. After completing the questionnaires, participants indicated whether they generally preferred lyrics, beats, or both while listening to music. They were then thanked for their participation.

The collected data were coded and entered into IBM SPSS Statistics for analysis. Instrument scores were calculated according to their respective scoring manuals before statistical analyses were performed. The findings were interpreted in light of existing literature, followed by a discussion of the study's implications, limitations, and recommendations for future research.

Result

Keeping in mind the objectives of the present research, this chapter deals with the analysis and interpretation of data. It reports the data collected in connection with this research. First, the personal profile of the respondents has been given. Further, to facilitate the analysis and interpretation of the data collected, various statistical techniques like Karl Pearson's correlation coefficient (r) and the chi-square test for independence are used. For analysing the collected data, the IBM SPSS Statistics software is used. The result has been presented in accordance with the specific objectives of the study.

Table 1*Means and Standard Deviations of State-Trait Anxiety and the 4 Types of Music Preferences.*

VARIABLES	N	MEAN	SD
State anxiety	80	56.15	7.130
Trait anxiety	80	57.24	7.543
Reflective and complex music	80	4.818	1.007
Intense and rebellious music	80	4.038	1.204
Upbeat and conventional music	80	5.315	0.868
Energetic and rhythmic music	80	4.9803	1.206

This table summarizes the descriptive statistics for state and trait anxiety levels, as well as preferences for different music styles, in a sample of 80 young female adults. The table reports the mean (average) and standard deviation (SD) for each variable. The mean of state anxiety scores was 56.15, with a standard deviation of 7.130. whereas the mean score of trait anxiety was 57.24 with a standard deviation of 7.543. Both anxiety scores are relatively high, with similar means and standard deviations, indicating that the sample generally experiences elevated and consistent levels of both state (situational) and trait (general) anxiety. The score for music preferences is also shown in the above table. Reflective and complex music had a mean of 4.818 and an SD of 1.007. Intense and rebellious music has a

mean of 4.038 and SD of 1.204. Upbeat and conventional music got a Mean of 5.315 and an SD of 0.868. The mean and SD for Energetic and rhythmic music were 4.983 and 1.206, respectively. Among the music types, upbeat and conventional music has the highest mean preference, followed by energetic and rhythmic, reflective and complex, and finally intense and rebellious music.

Section A-

Table-2

Correlation Between State Anxiety and Music Preferences

	State anxiety	Reflective and complex music	Intense and rebellious music	Upbeat and conventional music	Energetic and rhythmic music
State anxiety	1				
Reflective and complex music	-.167	1			
Intense and rebellious music	-.234*	.282*	1		
Upbeat and conventional music	-.031	.124	.297**	1	
Energetic and rhythmic music	-.211	.285*	.403**	.279*	1

Note: * $p > 0.05$ ** $p > 0.01$

A Pearson correlation analysis was performed to explore the link between state anxiety and different music preferences. The results revealed a significant negative correlation between state anxiety and a preference for intense and rebellious music, $r(78) = -.23$, $p = .037$, suggesting that individuals with higher anxiety levels were less likely to favor this genre. Although the correlation between state anxiety and a liking for energetic and

rhythmic music was also negative, it did not reach statistical significance, $r(78) = -.21$, $p = .061$. Additionally, there were no significant associations between state anxiety and preferences for either reflective and complex music, $r(78) = -.17$, $p = .139$, or upbeat and conventional music, $r(78) = -.03$, $p = .787$.

Section B-

Table-3

Correlation Between Trait Anxiety and Music Preferences

	Trait anxiety	Reflective and complex music	Intense and rebellious music	Upbeat and conventional music	Energetic and rhythmic music
Trait anxiety	1				
Reflective and complex music	-.095	1			
Intense and rebellious music	-.162	.282	1		
Upbeat and conventional music	-.158	.124	.297**	1	
Energetic and rhythmic music	-.116	.285	.403**	.279*	1

Note: * $p > 0.05$ level, ** $p > 0.01$ level

A Pearson correlation analysis was conducted to examine the relationship between trait anxiety and four dimensions of music preference. The results indicated no significant correlations between trait anxiety and any of the music preference categories. Specifically, the correlations were as follows: reflective and complex music, $r(78) = -.10$, $p = .402$; intense and rebellious music, $r(78) = -.16$, $p = .150$; upbeat and conventional music, $r(78) =$

-.16, $p = .162$; and energetic and rhythmic music, $r(78) = -.12$, $p = .304$. These findings suggest that trait anxiety is not significantly associated with preference

Section C-

Table-4

Chi-Square Test for Independence for Association Between the Level of State anxiety and Preference for Different Elements of Music

Pearson Chi-Square	Value	df	p-value
	3.115	2	.211

A chi-square test of independence was conducted to examine the relationship between state anxiety level (low vs. high) and lyrical preference (lyrics, beats, both). The association was not statistically significant, $\chi^2(2, N = 80) = 3.12$, $p = .211$, indicating that lyrical preference was not dependent on participants' level of state anxiety.

Section D-

Table-5

Chi-Square Test for Independence for Association Between the Level of Trait Anxiety and Preference for Different Elements of Music

Pearson Chi-Square	Value	df	p-value
	.579	2	.749

A chi-square test of independence was performed to examine the relationship between trait anxiety level (low vs. high) and lyrical preference (lyrics, beats, both). The association

was not statistically significant, $\chi^2 (2, N = 80) = 0.58, p = .749$, suggesting that lyrical preference does not significantly vary with levels of trait anxiety.

Discussion

The present study examined the relationship between state and trait anxiety and music preferences among young adult women. The findings revealed that higher levels of state anxiety were significantly associated with a lower preference for intense and rebellious music genres, including alternative, rock, and heavy metal. This finding is consistent with the work of Taipale et al. (2024), who reported that individuals experiencing heightened anxiety often avoid highly arousing or emotionally intense music, as such genres may increase emotional distress or sensory overload. The absence of significant associations between state anxiety and reflective/complex, upbeat/conventional, and energetic/rhythmic music suggests that temporary anxiety does not uniformly influence musical preferences across all genres.

No significant relationship was observed between trait anxiety and any of the four music preference dimensions or lyrical preferences. These findings may indicate that stable anxiety traits have limited influence on long-term musical preferences. Rentfrow and Gosling (2003) proposed that musical tastes are shaped by a combination of developmental, contextual, and social influences rather than by enduring emotional dispositions.

The Chi-square analyses also indicated no significant association between anxiety levels and preferences for lyrics, beats, or both, suggesting that lyrical preference is independent of both state and trait anxiety. This finding corroborates earlier research by Chin and Rickard (2014), Thompson et al. (2016), which showed that music selection is primarily guided by emotional regulation needs, familiarity, and functional use rather than anxiety levels alone. Taken together, the present findings suggest that while transient anxiety may

influence the avoidance of highly stimulating music, overall music preferences among young adult women are more strongly shaped by cultural, social, and situational factors than by chronic anxiety.

Conclusion

This study provides a nuanced exploration of the interplay between anxiety, in both its temporary (state) and enduring (trait) forms-and music preferences among young female adults. The results of the study conducted showed significant negative relationship between state anxiety and intense-rebellious music genres, showing that females with heightened state anxiety are more likely to have decreased preference for music falling in genres like alternative, rock and heavy metal. The research underscores that anxiety is not only highly prevalent in this demographic but also manifests with greater intensity and frequency compared to their male counterparts. This heightened vulnerability is shaped by a variety of biological, psychological, and social factors, including hormonal fluctuations, societal expectations, and unique cognitive patterns.

A key insight from the study through the literature review is the dynamic and intentional use of music by young women as a coping mechanism for managing anxiety and regulating emotions. Unlike static preferences, their music choices shift fluidly in response to their emotional state: calming and soothing genres are often favoured during periods of acute anxiety, while more upbeat or intense music may be selected when experiencing low mood or seeking emotional release. This adaptive use of music highlights its role as a versatile tool for self-soothing, distraction, and emotional expression. (Saarikallio & Erkkilä, 2007, Chin & Rickard, 2014)

Furthermore, the research reveals that individual differences in anxiety-whether situational or trait-based-significantly influence musical preferences and coping strategies. Some individuals with high anxiety gravitate toward gentle, melodic music for relaxation, while others may prefer more intense genres such as rock or heavy metal to achieve catharsis or diversion. Taipale et al. (2024) These findings emphasize the importance of recognizing and respecting personal differences when considering music as a therapeutic intervention.

Despite India's rich musical heritage and the growing awareness of music's therapeutic potential, there remains a notable gap in research specifically addressing how young women use music to manage anxiety. This study addresses that gap, offering evidence that music can serve as an accessible and effective means of emotional support for this population.

In conclusion, the study advocates for more personalized and gender-sensitive approaches to using music as a tool for anxiety management. By deepening our understanding of the relationship between anxiety and music preferences in young female adults, this research lays the groundwork for developing targeted interventions that harness the power of music to promote mental well-being. It also calls for further exploration into the complex, multifaceted connections between emotional health, gender, and cultural context, ultimately contributing to the broader field of music psychology and mental health support.

Implications

Music preferences among young individuals, particularly young women, may serve as a reflection of underlying emotional vulnerabilities such as anxiety, rather than acting as a causal factor. The popularity of specific music genres among those with elevated anxiety levels indicates that music selection could function as a potential marker of mental health

status. Although music has the potential to aid in anxiety management, certain individuals may engage with it in ways that perpetuate negative emotions or encourage avoidance behaviours, which may be maladaptive. Further research is warranted to investigate these usage patterns in order to enhance the development of informed therapeutic interventions. Exploring the connection between anxiety and music preferences can assist educators and clinicians in recognizing individuals who may be at risk. This understanding can also help in creating personalized music-based strategies to reduce anxiety and support emotional well-being. The findings may help developers explore personalized music recommendation systems that consider users' emotional needs.

Limitations: The research study followed a purposive sampling technique and not a random sampling technique for data collection. This may have led to many types of biases. The participants of this research study were concentrated in the eastern Odisha, which may in order lead to some sort of bias. Though, the data was collected by making the participant understand each and every statement of the questionnaire, the questionnaire used to know the music preferences is not native to the Indian subcontinent. This may have created confusion among participants, affecting the results of the study.

Recommendation: Random sampling can be used to collect the data, so that everyone gets equal chance of participating in the research and the problem of bias is reduced. To avoid type-1 error, study on a larger sample is advised for accurate and bias free results. A better questionnaire can be made and used, adhering to the music preferences specific to India, so that the chances of cultural biases and the problem of societal context are eliminated.

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