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Exploring the Role of Music on the Development of Emotional Intelligence and Self-Concept Amongst Musicians and Non-Musicians

Ms. Megha Ravuri[1], Dr. Soumya RR[2]

[1]Student Psychology CHRIST (Deemed to be University)
[2]Assistant Professor Psychology CHRIST (Deemed to be University)

Abstract
This paper explores the role of music on emotional intelligence and self-concept by comparing two groups: musicians and non-musicians. Emotional intelligence and self-concept are crucial for psychological well-being and social competence. Music, with it's inherent emotional expressiveness, is believed to influence these areas of human experience. A quantitative design will be used, employing standardized measures such as the Emotional Intelligence Inventory (Thomas & Sushama, 2003) and the Self-liking/Self-Comparison Scale. The sample (n=110) will be purposively selected and equally distributed between musicians and non-musicians. This research aims to provide empirical evidence on music's role in enhancing emotional well-being and interpersonal skills, informing educational practices and interventions for socio-emotional development.

Keywords: Music, Emotional Intelligence, Self-Concept, Musicians, Non-Musicians, Mixed-Methods, Socio-Emotional Dimensions

INTRODUCTION

The tremendous effects of arts education on people's overall development are becoming more widely acknowledged in educational discourse, especially concerning socio-emotional competencies like empathy, emotional intelligence, and self-concept. The arts, which include a variety of expressive genres like dance, theater, visual arts, and music, provide people with special opportunities to express themselves creatively, explore and express their feelings, and develop an integrated perception of self. With implications for both music students and individuals not formally involved in arts education, the impact of arts participation on the development of empathy, emotional intelligence, and self-concept emerges as a compelling field of investigation within this framework.

Music, in particular, holds a prominent position as a medium for emotional expression and interpersonal communication, making it a focal point for investigating the impact of arts on socio-emotional development. Investigating the influence of the arts on socio-emotional development centers on music, in particular, because it is a prominent medium for interpersonal communication and emotional expression. Compared to those who do not undergo formal music training, music students who receive formal instruction and are immersed in musical activities may experience different paths leading toward socio-emotional development. However, the extent to which arts engagement, and music education, in particular, influence the development of empathy, emotional intelligence, and self-concept remains an open-ended

question that warrants further empirical evidence and investigation.

Against the backdrop of the above literature, this study aims to clarify possible disparities in the socio-emotional results between the two groups, illuminating the special benefits of arts education to holistic development in a range of educational contexts.

A person's creative growth and development is greatly influenced by art. Using art in the classroom gives pupils the chance to realize their creative potential and balance the logical and emotional aspects of their work. To realize the goals and requirements of professional activity, aesthetic perception, and understanding of beauty, art education is a complex and integrated process that involves the development of aesthetic judgments, feelings, values, ideals, behavior, and specific creative experiences. It also enables successful professional activity in a variety of fields (Svitlana, et al., 2022).

Personality, motivation, and social and cognitive traits are all correlated with emotional intelligence (Strelau & Zawadzki, 2008). Since emotional intelligence and vital mental health components are related, it follows that emotional intelligence is a necessary skill for success in life (Goleman, 1997). Individuals who possess an acceptable and heightened level of emotional intelligence, whether they are musicians or not, are more likely to retain mental well-being and even better health in addition to performing well in the classroom or in the music profession. Additionally, studies have shown that emotional intelligence rises with the duration of musical instruction (Petrides et al., 2006).

The literature on music psychology addresses the topic of emotional expression in music. The characteristics of emotional communication between people involved in making, performing, and listening to music have received special attention.

Considerable research may have been conducted on the theme surrounding arts and its influence on the emotional concept of an individual. However, existing literature does present itself with gaps that warrant further research. While the influence of art on an individual's character strengths and emotional quotient may have been conducted, not much has been explored in the space of conducting a comparative study between 2 groups - one actively involved in music vs one that is not. Numerous research works have only examined music students or those in arts programs, failing to compare their socio-emotional growth to that of those who do not study the arts. By filling this gap, a more thorough knowledge of the varying effects of arts education is made possible by enrolling non-music students and music students in the same study.

Prior research has often failed to take into consideration moderators or contextual factors that could affect how arts education and socio-emotional development are related. Education in the arts can improve empathy, emotional intelligence, and self-concept, but its effects may be mitigated by elements including cultural or family background. While there may have been correlations established in the past for the relationship between arts and its influence on socio-emotional development, these constructs have not been individually explored yet and the mechanisms attributing to the changes or development of these constructs when influenced or by hasn't been widely explored. Hence, this study will attempt to bridge this gap in the literature.

Hypothesis:

H1 - There is a significant difference in the levels of development of emotional intelligence amongst musicians vs non-musicians.

H2 - There is a significant relationship between the levels of emotional intelligence, and self-concept among musicians vs non-musicians.

Aim:
How does active involvement and engagement with music correlate with a higher sense of self-concept and emotional intelligence in comparison to non-music students?

METHODOLOGY

Sampling:

1) Sample

Approximately 110 participants were recruited for the study. Based on the total number (n) of participants, an equal number has been distributed between the 2 internal sample groups i.e. music students and non-music students.
(For instance, n=110, then 55 participants were representative of the music students group and the remaining 55 were representative of the non-music students group.

2) Technique:

The sampling technique employed was Purposive Sampling, as this allowed data to be collected efficiently among the participants while considering the exclusion and inclusion criteria. Purposive Sampling offers researchers greater efficiency and flexibility in recruiting participants that serve and best align with the objectives of the study.
This sampling technique helps to efficiently gather a relatively large sample of participants belonging to a musical as well as non-musical background.

Inclusion Criteria -
Participants must meet the following criteria to be eligible to participate in the study:
1) Participants must provide valid informed consent before the study procedure
2) Individuals with a minimum age of 18 years are required.
3) A minimum of 2-3 years of training experience in the art form of music is required for the participants that will constitute the 'music students' sample group.

Exclusion Criteria -
Participants may be excluded if any of the following criteria are not met:
1) Individuals with specific cognitive conditions that may affect their ability to comprehend and engage during the study may be excluded.

Tools Used:

1) The Emotional Intelligence Inventory (Thomas and Sushama, 2003) consists of 50 items. Each item has 5 options from which the participant is supposed to tick and choose the most suitable option in the context of the statement given. For fully agree, agree, undecided, disagree, and completely disagree, the scores are 5, 4, 3, 2, and 1 respectively. Using Cronbach alpha, the emotional intelligence inventory's reliability has been determined; the coefficient achieved is 0.88 (N=432). Following attenuation correction, the odd-even split-half reliability approaches yield a result of 0.86 (N=432).
2) The tool for assessing self-concept would be the Self-Liking/Self-Comparison Scale.

Data Collection:

This study involved the collection of data through the distribution of questionnaires to all the participants. The mode of collecting data was online with the help of the various social media platforms to ensure easy

and smooth access to the Google forms. The participants received the Google forms in the form of a specific link that was created specifically for this study. The participants were given the benefit of filling in this form at their convenience and submitting it.

Data Analysis:

Post the collection of data, through the responses from the questionnaires and scales administered, data was analyzed with the help of the JAMOVI software:

- As the data distribution was not normally distributed on the curve, Spearman's Rank Correlation was employed between the scores of the 2 variables obtained from the scales administered, to examine the relationships between EI and Self-Concept among musicians vs non-musicians.
  An independent sample t-test was employed to assess if there are any statistically significant mean differences in the levels of EI and Self-concept among musicians and non-musicians. As there are 2 independent groups (i.e. musicians vs non-musicians), this test would be best suitable to compare the mean differences existing between these 2 independent groups.
- The Mann-Whitney U test was employed as a non-parametric alternative to test the Independent Sample t-test.

Ethical Considerations

The ethical considerations section becomes the most critical part of any research proposal as it ensures that the research respects the rights and dignity of all individuals from the community involved in the research.

Firstly, Informed consent is of utmost importance. Providing the participant with a clear and elaborate description of the purpose, procedure, risks, and benefits of this study is necessary. The participants must be made aware of their right to withdraw, at any given point during the research study if they feel like their comfort or rights are being violated.

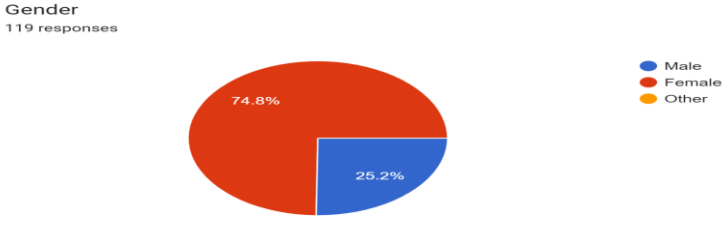
Confidentiality and Anonymity of data will be maintained. Information must be kept secure and not disclosed to any unauthorized parties. The data must be used for educational purposes only.

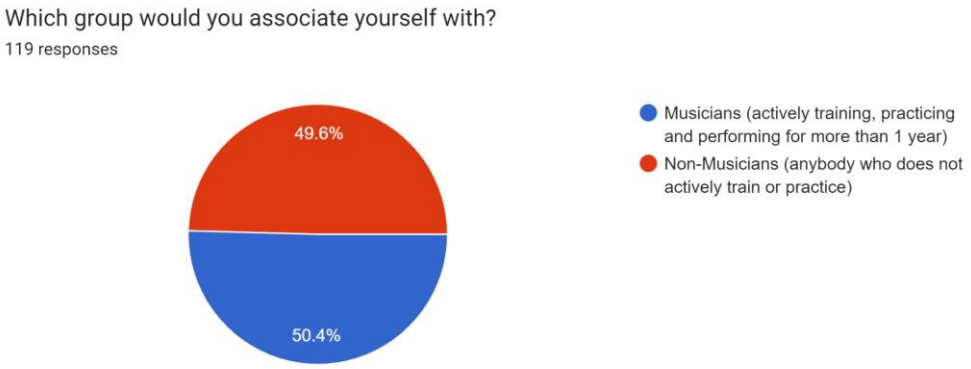
Participation in the study should be entirely voluntary. At no given point, must the participant feel forced to enroll in this study. Researchers need to consider the participants' potential vulnerability, particularly while involving topics such as emotional intelligence, and ensure to make the necessary accommodations or take suitable measures to avoid or minimize distress. Overall, the research should adhere to and align with the ethical standards and guidelines put forth by the ethical committees and review boards, safeguarding the rights and process of the research.

Results:

Quantitative Analysis

Demographic Details





Descriptives

Descriptives					
		Emotional Intelligence		**Self Concept**	
N		119		119	
Missing		881		881	
Mean		126		51.1	
Median		127		52.0	
Standard deviation		15.8		8.84	
Minimum		11.8		0.00	
Maximum		153		75.0	
Skewness		-3.33		-3.15	
Std. error skewness		0.222		0.222	
Shapiro-Wilk W		0.775		0.681	
Shapiro-Wilk p		< .001		< .001	

Table - Descriptives

In the context of the variable of Emotional Intelligence (EI), it can be observed that the average EI of the participants is 126, which suggests a moderately high level of emotional intelligence amongst the participants. The skewness of the data indicates that the distribution of EI scores is highly negatively skewed. The Shapiro-Wilk Statistic is 0.775, and the p-value <.001, indicating that the distribution of the EI scores significantly deviates from normality. Since the p-value is <.001 and since in Shapiro-Wilk, the p-value needs to be more than 0.05 to be normally distributed; the data for the EI scores is not normally distributed.

Similarly, in the context of the variable Self Concept (SC), the self concept score is 51.1, indicating an average self-concept across the participants. The skewness of the data indicates that the distribution of the SC scores is negatively skewed. In the Shapiro-Wilk Test, the W statistic is 0.681 with a p-value <.001, indicating a significant deviation from normality for self-concept scores. Since the p value is less than 0.05, the data is not normally distributed.

Overall, the data on self-concept and emotional intelligence both have a negative skew, indicating that most participants score higher on both measures. It appears from the significant Shapiro-Wilk test that the data deviates from a normal distribution.

Table I - Independent Samples T-Test

		Statistic	p	Mean difference	SE difference
Emotional Intelligence	Mann-Whitney U	1304	0.037	4.000	
Self Concept	Mann-Whitney U	1555	0.485	1.000	

Note. $H_a\ \mu_1 \neq \mu_2$

In the context of the variable EI, the U statistic is 1304 with a p-value of 0.037, indicating a statistically significant difference in Emotional Intelligence between the 2 groups that are being compared. On the contrary, in the context of the variable SC, since the U statistic is 1555 with a p-value of 0.485, this indicates no significant difference in SC between the 2 groups.

Overall, the emotional intelligence between the 2 groups differs significantly according to the Mann-Whitney U test, indicating that one group is likely to be more emotionally intelligent than the other; as compared to the Self-Concept ratings, which suggests that there is no significant difference between the 2 groups in levels of self-concept.

Table II - Correlation Matrix (Correlational Analysis)

		Emotional Intelligence		Self Concept	
Emotional Intelligence	Spearman's rho	—			
	df	—			
	p-value	—			
Self Concept	Spearman's rho	0.422	***	—	
	df	117		—	

		p-value		< .001		—	

Note. * p < .05, ** p < .01, *** p < .001

Since the overall data set is not normally distributed, the Spearman's Rho (i.e. a non-parametric test) has been used to test the correlation matrix. The correlation coefficient (ρ) between Emotional Intelligence and Self-Concept is 0.422, which is significant at the p < .001 level. This is suggestive of a positive correlation, which indicates that individuals with higher Emotional Intelligence tend to have a higher Self-Concept. The strength of the correlation being moderate suggests that while there may be a significant association between the 2 variables, it is not overpowering.

Overall Interpretation:

Self-concept refers to an individual's perception of themselves, encompassing their beliefs, values, and sense of worth. Emotional intelligence, on the other hand, involves the ability to recognize, understand, and manage one's emotions, as well as empathize with others. These domains are interconnected as one's self-concept can influence emotional regulation, empathy, and interpersonal interactions.

Given the non-normal distribution, non-parametric tests are appropriate because they do not assume normality and are less sensitive to skewed data. The **Mann-Whitney U test**, a non-parametric equivalent of the t-test, is used here to assess differences in emotional intelligence between two groups. This test ranks the data and compares the ranks rather than the raw scores, which makes it robust to outliers and non-normal distributions. The significant variations detected in emotional intelligence between groups through the Mann-Whitney U test reinforce the existence of a meaningful difference without relying on normality assumptions.

Additionally, **Spearman's Rho**, another non-parametric test, is chosen for correlation analysis. Unlike Pearson's correlation, which assesses linear relationships and assumes normally distributed data, Spearman's Rho evaluates the strength and direction of a monotonic relationship without the need for normality. This test is well-suited to handle the ordinal or skewed data often encountered in psychological constructs, providing a clearer picture of the association between self-concept and emotional intelligence. The data indicates a strong correlation between self-concept and emotional intelligence, suggesting a favorable association between the two domains of study. While self-concept is unaltered, the Mann-Whitney U test reveals significant variations in both groups' emotional intelligence. The data is not normally distributed, as indicated by the skewness and significant Shapiro-Wilk test findings, which support the use of non-parametric tests such as the Mann-Whitney U and Spearman's Rho. This analysis emphasizes how crucial it is to take distribution factors into account and choose the right statistical tests when examining psychological data.

Discussion and Key Findings:

Musicians scored significantly higher in emotional intelligence compared to non-musicians. Statistical analysis confirmed a notable difference, highlighting that formal engagement in music is associated with elevated levels of emotional intelligence. There was no statistically significant difference in self-concept scores between musicians and non-musicians. This suggests that while emotional intelligence varies by musical engagement, self-concept may not be directly influenced by musical training being a factor alone. A positive, significant correlation between emotional intelligence and self-concept was found, indicating that higher emotional intelligence is associated with a more positive self-concept among participants

across both groups. Emotional intelligence differences reflect musicians' potential for more effective emotional regulation compared to non-musicians, which quantitative findings support.

Conclusion

This study highlights the significant role music plays in developing emotional intelligence and shaping self-concept for both musicians and non-musicians. Music serves as a key tool for emotional expression, regulation, and personal growth. Musicians, through their formal engagement with music, often develop a deep emotional awareness and use music as a medium for self-reflection, healing, and identity formation. Non-musicians, though less formally engaged, also benefit from music's ability to foster emotional insight, regulate mood, and strengthen social bonds. In conclusion, this study illustrates that music transcends skill and performance; it is a universal language that supports emotional intelligence and personal growth, regardless of one's formal training.

Limitations:

The geographical location of the study was limited to participants belonging to the southern cities and the mid-belt cities of India. Gender differences was a factor that could have been explored.

Implications

Given the strong correlation established between music and emotional regulation, it is possible that music therapy can benefit greatly from its application. Future interventions might look into using music therapy to improve emotional intelligence. Music-based activities may be used in programs designed to enhance mental health and emotional well-being to facilitate better emotional processing and expression. A greater understanding of music therapy and its advantages by the general public may result in a wider adoption and incorporation of these techniques in a variety of healthcare and educational settings.

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