Depression among non-music and music students- a comparative study

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Abstract:

BACKGROUND:

Depression is a prevalent psychological condition that adversely affects individuals' emotional well-being, cognitive abilities and quality of life. Among students, factors such as academic pressure, lifestyle changes and lack of creative outlets can contribute to increased depressive symptoms. Music as a form of creative expression has been widely recognized for its therapeutic benefits in alleviating stress, enhancing mood and promoting emotional regulation. This comparative study aims to measure and analyze the levels of depression among non-music and music students, highlighting the potential psychological benefits of musical engagement.

***OBJECTIVE*:** To measure and compare the level of depression among non-music and music students.

***HYPOTHISIS*:** There would be significant difference in Depression between non-music and music students

MATERIALS AND METHODS The sample consisted of 80 students (40 music and 40 non-music students) aged 16-21 years, from in and around Belagavi city selected by using convenience sampling method. Depression scale from DASS (Depression Anxiety Stress Scale) used for assessment.

***STATISTICAL ANALYSIS*:** Percentage method and Independent *t*-test were applied.

***RESULTS*:** Results showed that the majority of participants in the music group (97.50%) had normal levels of depression.

***CONCLUSION*:** The level of depression was low in music students and there was a significant difference between non-music and music students on depression.

***Key words*:** Depression, Music, Non-Music Students and cognitive functioning

I. INTRODUCTION

Life is beautiful, but it is having odds too. Human beings have ups and downs in life. When it comes to ups individual feels happy but when it comes to downs it starts negatively affecting the individual's positive traits, quality of thinking and the overall wellbeing. When Individual is happy with high level of positive affect, experiences pleasure, consider themselves happy, enthusiastic and confident but when it comes to negative affect, he/she experiences intense displeasure, perceive themselves as anxious, discouraged. An individual may start experiencing high level of anxiety, lower optimism, stress and depression.[1]

Depression is a mental health condition that affects person's emotional state and overall functioning. It is marked by prolonged sadness, reduced interest in previously enjoyable activities and various physical symptoms such as changes in sleep and eating habits. Individuals with depression may also experience feelings of low self-worth, helplessness and find it hard to complete everyday tasks.[2]

Depression results from a combination of biological, psychological and environmental influences. Biological aspects include hormonal fluctuations, genetic predisposition and variations in brain chemistry that may heighten the risk of depression. Psychological contributors such as low self-esteem, excessive self-criticism and past experiences of trauma or abuse also play a crucial role. Environmental factors like academic stress, social isolation, family issues, financial difficulties and exposure to bullying or peer pressure can lead to depressive symptoms.[3]

Research Studies in adolescents and young adults identified several common symptoms of depression like prolonged feelings of sadness, diminished interest in previously enjoyable activities, disruptions in eating and sleeping patterns, trouble focusing, a sense of hopelessness, academic stress, persistent fatigue and thoughts of self-harm or suicide.[4,5]

These symptoms can significantly impact an individual's emotional, cognitive functioning and physical well-being. It is associated with difficulties in concentration, decision-making and memory along with persistent feelings of hopelessness and fatigue. Additionally, it can impair social relationships and work performance contributing to a reduced quality of life.[6]
The National Mental Health Survey of India (2015–2016) reported that about one in every twenty individuals in India experiences depression, with a prevalence rate of 2.7% and a lifetime prevalence of 5.2%.[7]

Art therapy like music has been widely recognized and served as a therapeutic tool helping to alleviate symptoms of depression. Research indicates that engaging in creative activities such as music therapy can enhance emotional expression, reduce stress and improve overall well-being and found that music therapy significantly reduces depressive symptoms when combined with standard treatments such as psychotherapy and medication. The study emphasized that music facilitates emotional processing and social connection, both of which are crucial for individuals with depression.[8]

Music has been shown to be a valuable tool in reducing depression among students. Students who actively engaged in musical activities such as singing, playing instruments or composing music showed a significant decrease in depressive symptoms. Research emphasized that participating in music promotes emotional expression, enhances social connections and fosters a sense of achievement, all of which support better mental health. Based on these findings, integrating music-based programs in educational institutions could serve as an effective strategy to help students manage and reduce depression.[9]

It is evident from research findings that musicians had significantly higher level of mental health and emotional regulation than non-musicians. When individual listen to music, his/her brain releases dopamine, a happy hormone, a neurotransmitter associated with pleasure and reward. This can help to feel happier, more relaxed and less stressed.[10]

Studies concluded that music therapy was a useful tool for treating depression and it can be applied both to prevent and treat depression. This intervention can be successful as a means of reducing anxiety and stress.[11,12]

By keeping these scientific research findings and benefits of the music in view, current study is undertaken with the aim of measuring and comparing Depression among non-music and music students. So that when such non-pharmacological intervention found useful, it can be suggested to be applied and used in academic and daily life of children and adolescents who are the future of country.

II. MATERIALS AND METHODS

***Research design*:** Comparative study

***Sampling technique*:** Convenience sampling

***Sample size*:** By using scientific formula a sample of 80 students (40 students in each group) was selected in and around the Belagavi district.

***Inclusion Criteria*:**

- Non-music students (in the age group of 16 and 21 years) not learning and practicing music were included in the study.
- Music students (in the age group of 16 and 21 years) learning and practicing music regularly were included.

***Exclusion criteria*:** Students below 16 years and above 21 years of age were excluded.

***Measure used*:** Depression scale from DASS by Peter F. Lovibond, Sarah H. Lovibond was used.

***Procedure*:** Present study was conducted among music and non-music students from the schools in and around Belagavi city, Karnataka only after seeking approval and ethical clearance from Jawaharlal Nehru Medical College Ethics Committee for Human Subjects' Research and permission from authorities of Institutions and Music Academies. The participants were selected through convenience sampling method. After briefing about the study, written Informed Consent was obtained from the parents of participants of below 18 years and assent was taken from these participants and Informed consent from participants of 18 years and above. Later, with advance notice, researcher met the participants and questionnaire was administered on them along with clear instructions and their doubts were attended and cleared by the investigator, 10-15 minutes of time was given to fill the questionnaire. Once the questionnaire was answered completely and accurately by the participants, they were collected back. The collected data was then produced for scoring and entered in MS excel for further statistical computation and analysis

III. RESULTS AND DISCUSSION

Health and wellbeing are very important for an individual not only to lead a life in a satisfactory manner but also to work in a well manner to have good level of cognitive and psychophysiological functioning. But there are certain hindrances that may

affect individuals like depression, anxiety and distress that not only affect their psychological state and wellbeing but also their way of working, thinking, creativity, cognitive process and cognitive functioning. Depression and anxiety are strongly associated with deficits in cognitive functioning, including memory, attention and executive functioning.[13]

Depression is a prevalent psychological disorder that significantly impacts mood, cognition and behavior. As described by the **American Psychiatric Association (2013)**, it involves continuous feelings of sadness, diminished enthusiasm for previously enjoyable activities, and challenges in focusing or making choices. Genetic predisposition, neurobiological factors, chronic stress, psychosocial stressors such as trauma, childhood adversity and interpersonal difficulties are some of factors contribute to depressions.[14]

Depression is one of the common reasons people seek alternative therapies, like relaxation, meditation, breathing exercises etc.; and using arts like music is helpful in circulating endorphins, which play a role in regulating mood. As a result, music-based interventions are anticipated to have a positive impact on depression.[15]

Non-drug techniques nowadays are given more importance as they are proven to be safer and more effective without any side effects. Music therapy can improve mood, reduce stress and enhance overall well-being without the risk of adverse effects typically associated with pharmaceutical treatments. This technique is not only useful in management of the psychological or mental health concerns but also to enhance creativity and cognitive functions.[16]

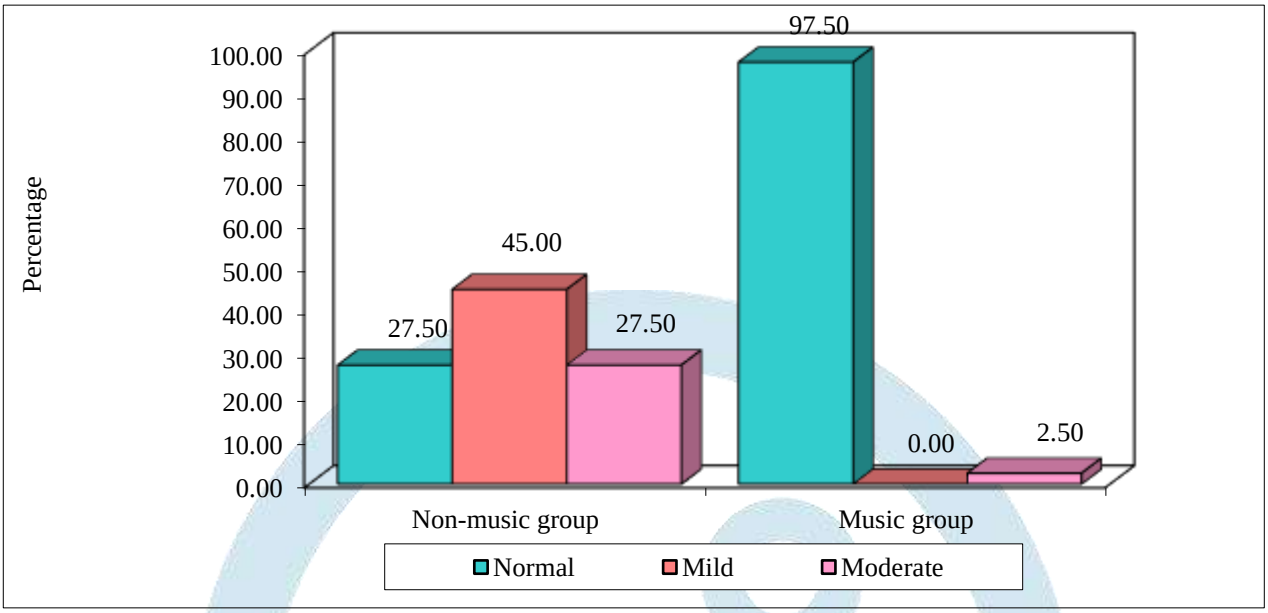
Results related to objective and hypothesis of this study are presented in table No 1 and 2.

With reference of the results presented in table No 1, it is observed that 27.50% from non-music group and 97.50% from music group were found to have normal depression, 45.00% of participants in the non-music group showed a mild level of depression, whereas none of the participants in the music group exhibited mild level of depression. Further, it is observed that 27.50% of participants in the non-music group had moderate level of depression, compared to 2.50% in the music group. Overall results show that the majority of participants in both groups had a normal level of depression. However, depression is found to be more prevalent in the non-music group compared to the music group.

These findings support the findings of previous studies revealing level of depression was low in music practicing students than those of who did not practice music.[17]

TABLE 1: SHOWING LEVELS OF DEPRESSION AMONG NON-MUSIC AND MUSIC STUDENTS.

Levels of depression	Non-music group	%	Music group	%	Total	%
Normal	11	27.50	39	97.50	50	62.50
Mild	18	45.00	0	0.00	18	22.50
Moderate	11	27.50	1	2.50	12	15.00
Total	40	100.00	40	100.00	80	100.00



Graph 1 Showing levels of depression between non-music and music group

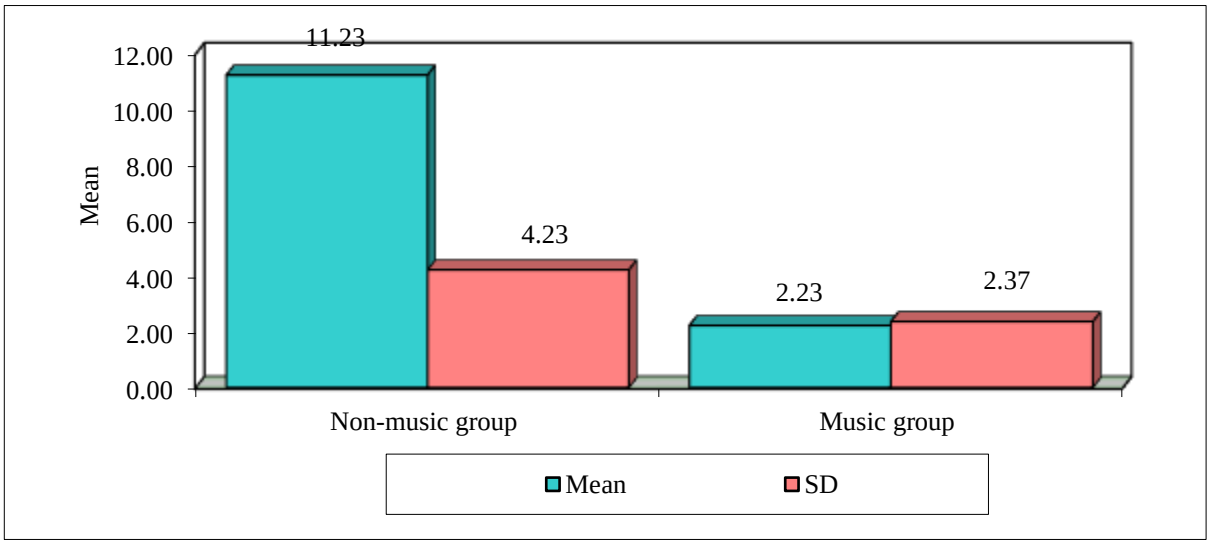
Results related to hypothesis "There would be significant difference in Depression between non-music and music students" is presented in table No 2 and discussed.

In reference with Table 2, the mean depression score for the non-music group is 11.23, while music group had a much lower mean score of 2.23 and SD for the former group is 4.23 and for later it is 2.37. Comparison of mean score (with the difference of 9.00) and computed *t*-value is 11.7454 demonstrate clearly that there is a significant difference between these two groups on depression. The P-value is 0.0001, which is highly significant, confirming the hypothesis. It is also observed that non music group exhibited higher depression levels compared to the music group.
Thus, the hypothesis is accepted beyond doubt.

Present results also confirm the findings of the previous research studies showing students who attended and practiced music activities more frequently had lower depression scores than those who did not practiced it.[18]

TABLE NO 2: SHOWING COMPARISON OF NON-MUSIC GROUP AND MUSIC GROUP ON DEPRESSION

Gender	N	Mean	Mean dif	SD	SE	t-value	P-value
Non-music group	40	11.23		4.23	0.67		
Music group	40	2.23	9.00	2.37	0.37	11.7454	0.0001



Graph No 2: Showing comparison of Mean and SD scores for Non-music group and Music group.

IV. CONCLUSION

1. Level of depression is low in music students compared to non-music students.
2. There exists a significant difference in depression between non-music and music students.

V. LIMITATIONS OF THE STUDY

1. The study was conducted on a limited sample size.
2. This study was restricted to Belagavi district.

SUGGESTIONS

1. Schools and colleges should integrate music programs as part of their curriculum to help students manage stress and improve emotional well-being.
2. Future research can include a larger and more diverse sample from multiple geographical regions to enhance generalizability.
3. The study can be replicated with participants from different age groups to assess the long-term effects of music on depression.

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