

Impact of Music on the Mental Health of the University Students with Respect to Gender Difference

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ABSTRACT

Music has a reasonable impact on human body and mind. Various studies suggested that music has capability of psychological and physiological wellbeing. Mental health is a crucial issue in young generation for shaping up of their personality and carrier. The present study aimed at assessing the mental health status of the students studying in universities and compares the difference between male students and female students with respect to the three important factors of mental health i. e. Depression, Anxiety and Stress. Further the study also assessed the difference of mental health status between students studying music and students studying other subjects to ascertain whether active participation in music has any role to shape up mental health for both the gender at university level. Cross-sectional survey research method was used and DASS21 was administered to collect data. A total of 612 UG and PG students studying music and other subjects in different colleges and departments of University of Calcutta and RabindraBharati University were the sample of the study. The study revealed that female students suffers mental health related problems more than the male students. The study also suggested that students studying music have a better mental health status in comparison to those who study other subjects indicating that music an important cultural agent plays an important role in managing mental health.

1. Introduction

The students studying at university level are at the developmental stage to become useful citizens for the society and for the self as well. Students at this stage pass through a very crucial but critical stage. Because, at this period physical, biological as well as psychological changes in life affects their developmental process. During this period they run through academic pressure, career building, fantasy, identity crisis, emotional breakthrough altogether resulting in complexity and insecurity, leading to traumatic situation, anxiety, stress, depression etc. To handle all these and building up a successful future a psychological balance is a need. Because at this stage this young generation goes through a process of shaping up their overall personality where both physical and psychological growth is essential for a balanced development. Mental health is an important factor to influence overall behavior and personality. From ancient period to these days it has been established that music has a reasonable association with emotion of human being and thereby, it has the capability to influence mental health.

Music therapists have shown that diseases related to mental health precisely, stress, anxiety and depression can be cured through music. Plato (428 BC- 347 BC) has said, "Music gives wings to the mind" and considered that music played in different modes would arouse different emotions. Beyond being a source of entertainment and certainly beyond the performance or active musical experience itself - music has the far reaching and long-lasting effects of restoring both mind and body (Babikian et al. 2013). A number of studies revealed that music has the credibility to cure mental infirmity. "Like body, the mind also needs regular cleaning. Mind pollution is more dangerous than air pollution, water pollution or food pollution.

Our classical music can act as soap, deodorant and perfume for the mind" (Suri). The staffs of Ashford University published an online article in student life style (2017) as "How do music affect your brain?" states that one of the first things that happens when music enters our brains, is the triggering of pleasure centres that release dopamine, a neurotransmitter that makes you feel happy and this response is so quick, that brain can even anticipate the most pleasurable picks in familiar music and prime itself with an early dopamine rush.

It is a fact that music is associated with human being and its environment from the very beginning or from the existence in one way or other and it has a great influence in human life on body, mind and spirit. Music is said to regulate emotions by temporarily allowing an escape from thoughts and feelings, and releasing pent up emotions, anxiety, energy and anger (Baker et al 2008). Thus music plays an effective and important role in enhancing mental health both physiologically and psychologically.

Music has association with human life right from the primitive age and it has been used in various ways. Participation in music may be active or passive. The active participation in music is through music education i.e. formal teaching-learning process of music. Here the musical engagement is under compulsion and supervision. Music education can include wider psychological developments as a secondary goal and this can overlap with the therapeutic approaches (Mac Donald 2013). Thus, it is expected that students studying music as specialization are the active participants and through their involvement with music should have a better mental health management.

2. Aims and Objectives

Keeping in mind that music has the capability to influence human mental health and active participants of music might have a better mental health status, this study started with the following objectives:

1. To compare the mental health status i.e. depression, anxiety and stress level between male and female students studying at university level.
2. To find out gender wise difference in mental health status (level of depression, anxiety and stress) between students studying music and students studying other subjects at university level.

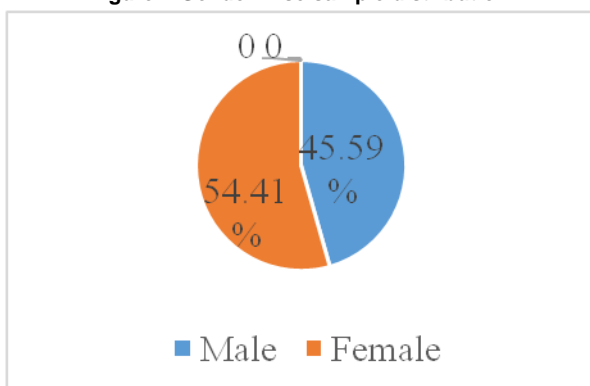
3. Methodology and Design

This study used cross-sectional survey method using DASS21 (Depression, Anxiety and Stress Scale by Fernando Gomez) to collect data because DASS21 is a user friendly 21 item self-reporting questionnaire to assess the severity of the core symptoms of depression, anxiety and stress and its internal consistency of each sub-scale and overall scale found high ranging from 0.70 to 0.90 (Cronbach's alpha) in various reliability and validity studies. According to DASS21, the severity ratings of Depression, Anxiety and Stress are divided into 5 levels. These are normal, mild, moderate, severe and extremely severe. Out of the said 5 labels, scores of **moderate, severe and extremely severe** indicate to have reasonable presence of symptoms of **Depression, Anxiety and Stress**.

4. Sample of the Study

A total number of 612 students of under-graduate and post-graduate students studying in different colleges and universities of University of Calcutta and RabindraBharati University were drawn as the sample of the study out of which 279 (45.59%) were male and 333 (54.41%) were female students.

Figure 1: Gender wise sample distribution



Out of 279 male students 97 (34.77%) male students were studying music while 182 (65.25%) were studying other subjects. Out of 333 female students 168 (50.45%) were studying music and 165 (49.55%) were studying other subjects. The sample distribution is shown in the following table and chart.

Table 1: Gender wise & Subject wise distribution of sample

Gender		Music	Other Subjects	Total
Male	Count	97	182	279
	%	34.77%	65.23%	100%
Female	Count	168	165	333
	%	50.45%	49.55%	100%

Figure 2: Subject wise Male students

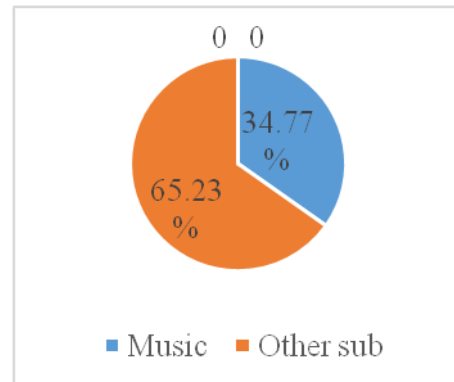
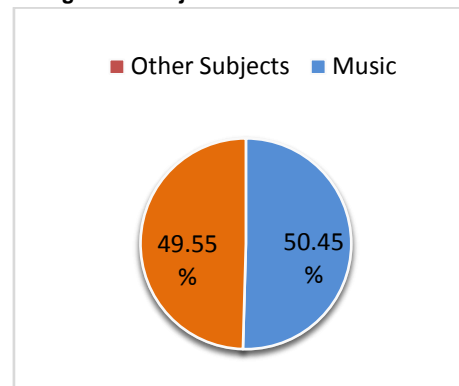


Figure 3: Subject wise Female students



5. Data Analysis

The data were collected administering DASS21 rating scale. Out of five severity labels rating scores only moderate (Mod), severe (S) and extremely (ES) ratings were included for analysis as these ratings indicate the sample having reasonable presence of symptoms of depression, anxiety and stress. Further, severe and extremely severe were clubbed together (S+ES) while moderate was taken separately.

Mental Health Status of Male students vs. Female students

Out of the total 612 sample 279 were male students and 333 were female students. In case of **Male** students in depression scale it was found that 77(27.60%) had moderate, 33 (11.82%) had severe and 19 (6.81%) indicated having extremely severe symptoms. In anxiety 59 (21.15%) had moderate, 27 (9.68%) had severe and 33 (11.82%) indicated having extremely severe symptoms. In stress scale 43 (15.41%) had moderate, 30 (10.74%) had severe and 13 (4.66%) indicated having extremely severe symptoms.

In case of **Female** students in depression scale it was found that 76 (22.82%) had moderate, 33 (9.91%) had severe and 50 (15.02%) indicated having extremely severe symptoms.

In anxiety 82 (24.62%) had moderate, 29 (8.71%) had severe and 56 (16.82%) indicated having extremely severe symptoms. In stress scale 62 (18.62%) had moderate, 50 (15.02%) had

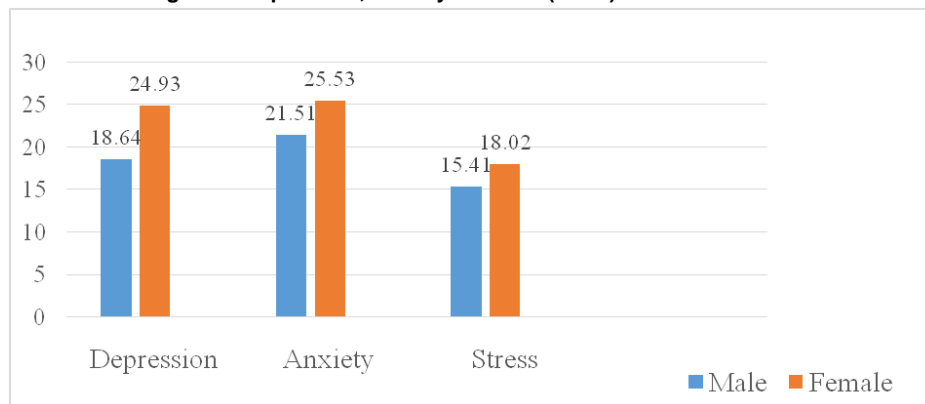
severe and 10 (3.00%) indicated having extremely severe symptoms.

The following table and figure shows the detail analysis.

Table 2: Depression, Anxiety & Stress ratings Male vs Female

Indicators	Rating levels		Male 279 No.	Female 333 No.	Difference	Remarks
Depression	Mod	Count %	77 27.60%	76 22.82%	4.78%	F < M
	S+ES	Count %	52 18.64%	83 24.93%	6.29%	F > M
Anxiety	Mod	Count %	59 21.15%	82 24.62%	3.47%	F > M
	S+ES	Count %	60 21.51%	85 25.53%	4.02%	F > M
Stress	Mod	Count %	43 15.41%	62 18.62%	3.21%	F > M
	S+ES	Count %	43 15.41%	60 18.02%	2.61%	F > M

Figure 4: Depression, Anxiety & Stress (S+ES) – Male vs Female

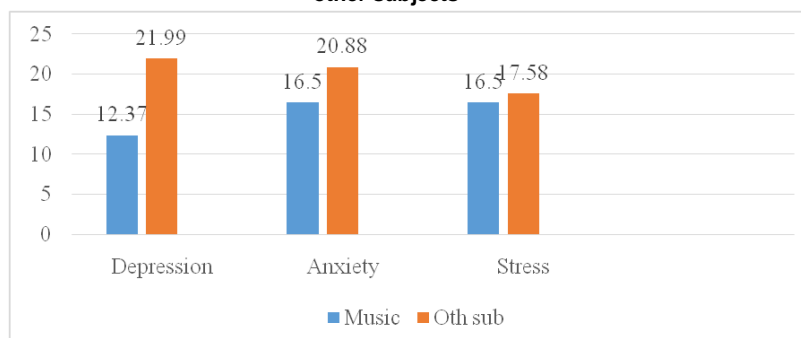


Mental Health Status of Students studying Music & Other subjects (Male & Female)

Out of 97 Male students studying Music, in depression scale, it was found that 30 (30.93%) had moderate, 7 (7.22%) had severe and 5 (5.15%) indicated having extremely severe symptoms. In anxiety 26 (26.80%) had moderate, 4 (4.12%) had severe and 12 (12.38%) indicated having extremely severe symptoms. In stress scale 9 (9.28%) had moderate, 8 (8.25%) had severe and 8 (8.25%) indicated having extremely severe symptoms.

While, out of 182 Male students studying other subjects, in depression scale it was found that 47 (25.81%) had moderate, 26 (14.29%) had severe and 14 (7.70%) indicated having extremely severe symptoms. In anxiety 59 (32.42%) had moderate, 23 (12.64%) had severe and 15 (8.24%) indicated having extremely severe symptoms. In stress scale 34 (18.68%) had moderate, 22 (12.09%) had severe and 10 (5.49%) indicated having extremely severe symptoms.

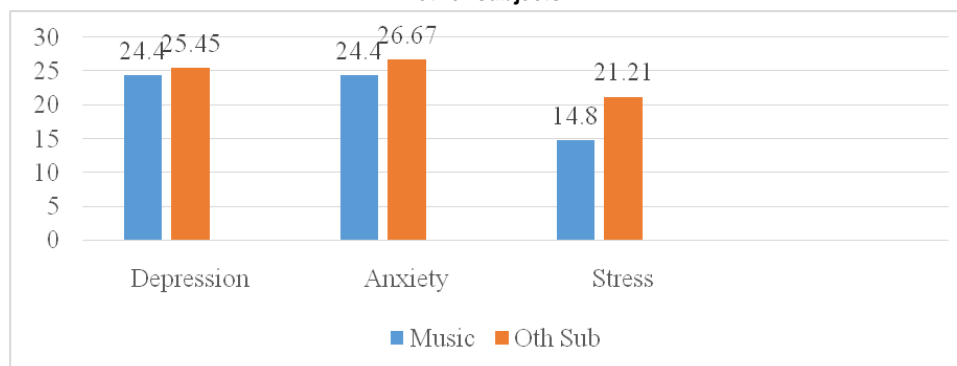
Figure 5: Depression, Anxiety, Stress (S+ES) of Male students studying Music vs. studying other subjects



Out of 168 Female students studying Music, in depression scale, it was found that 32 (19.05%) had moderate, 16 (9.52%) had severe and 25 (14.89%) indicated having extremely severe symptoms. In anxiety 40 (23.81%) had moderate, 15 (8.92%) had severe and 26 (15.48%) indicated having extremely severe symptoms. In stress scale 27 (9.33%) had moderate, 21 (12.50%) had severe and 4 (2.30%) indicated having extremely severe symptoms.

While, out of 165 Female students studying other subjects, in depression scale it was found that 24 (26.67%) had moderate, 17 (10.30%) had severe and 25 (15.15%) indicated having extremely severe symptoms. In anxiety 42 (25.45%) had moderate, 18 (10.91%) had severe and 26 (15.76%) indicated having extremely severe symptoms. In stress scale 35 (21.21%) had moderate, 29 (17.58%) had severe and 6 (3.63%) indicated having extremely severe symptoms.

Figure 5: Depression, Anxiety, Stress (S+ES) of Female students studying Music vs. studying other subjects



6. Results

The symptoms of mental health problems particularly depression, anxiety and stress has been found more in female students than that of male students. 27.60% of male students exhibited moderate, 11.82% severe, 6.81% exhibited extremely severe presence of depression as against female students 22.82% having moderate, 9.91% having severe and 15.02% having extremely severe presence of depression. If we take severe and extremely severe level of depression than 6.29% more of female students have symptoms of depression than the male students. Similarly in case of anxiety 4.02% more of female students have severe and extremely severe symptoms of anxiety than the male students. And in case of stress 2.61% more of female students have shown presence of symptoms of stress than the male students.

In both the genders male and female, students studying music have shown a better mental health status in all three factors i.e. depression, anxiety and stress than that of students studying other subjects. In case of male students the difference in the presence of symptoms of depression, anxiety and stress are 9.62%, 4.38% and 1.08% respectively. In case of female students the difference is 1.05%, 2.27% and 6.41% respectively for presence of symptoms of depression, anxiety and stress.

7. Discussion and Conclusion

The result revealed that sex differences bring out difference in mental health status on its three key factor i.e. depression, anxiety and stress. The present study found out that female students are more susceptible to have presence of symptoms of depression, anxiety and stress. This result goes along with the previous study of Sandanger et al. (2004) which says most epidemiological population studies have demonstrated that women suffer more anxiety and depression

than men and stress was more strongly related to symptoms in women, suggesting that they may have a greater susceptibility to surrounding stress and to somatic illness stress. WHO also suggested in its mental health document that gender is a critical determinant of mental health and mental illness, and depression is not only the most common women's mental health problem but may be more persistent in women than men. The probable reasons of female/women being more susceptible to mental health problems than men may be due to difference in internal biology and hormones, socio-economic determinants, their social positions, treatment they receive from society and being more emotional than men.

According to Margaret (2014) the onset of anxiety and depressive disorders picks during adolescence and early adulthood with female being at significantly greater risk than males. She also quoted Kessler et al. (1994) as women have twice the lifetime rates of depression and most anxiety disorders.

From the result of the study it has also been observed that university students who study music as their major subject are less in number exhibiting symptoms of having depression, anxiety and stress than those who study other subjects. This implies that active participation in music through formal music education enables better management of mental health. So, music is a tool which can reduce level of depression, anxiety and stress. The result of the study aligns with the concept of therapeutic use of music in treating depression, anxiety and stress disorder. The result of the study goes along with various studies as in the study of Chan et al. (2011) where he found out the effectiveness of music used as an intervention to relieve depression for older adults reducing their depression level.

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