THE EFFECT OF DIFFERENT GENRES OF MUSIC ON BLOOD PRESSURE AMONG DIFFERENT AGE GROUPS

ABSTRACT :

Many people listen to music during their day to day activities. Music is a combination of frequency, beat, density, tone, rhythm, repetition, loudness and lyrics. When we listen to fast beat music we get excited and slow beat music makes us to relax.There are different genres of music like rock, hip hop, pop ,classical, country, fazzy and these types of music has effect on blood pressure.The aim of the study is to know whether different types of music has effect on blood pressure or not. For this a cross sectional survey was conducted. This survey consisted of a self structured questionnaire. The sample size used for the study is 101. This standard questionnaire has been prepared and uploaded in google forms and circulated among the population, all the data were collected and the data has been analysed by using chi square analysis using the software IBM SPSS. The aim of the study is to evaluate the effect of different genres of music on blood pressure among the different age groups.

KEYWORDS Blood pressure, Music, stress, anxiety, music therapy.

INTRODUCTION

Today it is common to find people listening to music during many day to day activities. The reason for listening to music and the type of music varies with personal preference. Generally when we listen to fast beat music we get excited and slow beat music makes us relax. Music alters the mood and behaviour thereby induces changes in human emotions, that's why it is used as a therapeutic agent in the medical field (1). (2)Music can be used to reduce anxiety and stress in patients after surgery (3). (4)The relaxing effects of music have been culturally accepted for centuries, despite this music not given much attention in formal medical settings, where patients experience heightened levels of anxiety. Anxiety doesn't cause chronic hypertension, it can lead to acute elevations in blood pressure as may be noted with patients in a variety of medical fields (5). (6)Emotions induced by music such as pleasure or happiness have been widely investigated in brain imaging studies and psychological studies (7).(8)

There are western and eastern classical music systems which have a positive effect on the human body, rock, pop, jazz, rap, disco and other varieties of fast and high-beat music are found to have detrimental effects on health and blood pressure (9). (10)Listening to fast music increases blood pressure whereas listening to slower music can decrease blood pressure. A recent meta analysis of studies conducted in diverse clinical settings demonstrated that music interventions lead to significant reduction of systolic blood pressure (SBP), diastolic blood pressure (DBP) (11),(12). Music therapy is known to be effective for hypertensive patients and also it is beneficial to pregnant women and old aged people (13).(14)

Music can reduce the blood pressure depending on the temperature also. Music also has effect on brain, it improves brain health and function in many ways (15) Music has long been used as an alternative method of treatment to relieve patients from anxiety symptoms.Music therapy, or just listening to music can be good for the heart (13).(16)

Listening to Indian classical music for about 22 minutes significantly can reduce systolic and diastolic blood pressure. (11). (17)In this we are going to see different types of music like rock, hip hop, rap, country, jazzy and see the blood pressure whether it increases or decreases. (18). (19)Music has been used as an effective stress management tool for certain diseases. Music therapy is known to be effective for hypertensive and pre-hypertensive adults. (20). (1) In this study we are going to know whether msic has any effect on blood pressure or not. The aim of this study is to know the clinical aspects behind the different genres of music on blood pressure.

MATERIALS AND METHODS

A cross-sectional survey was conducted among the adolescent population with a sample size of 102. A self administered structured questionnaire was prepared by the help of Google form. Consisted of 15 questions. It was circulated to participants through an online platform (google form). The statistics were done using SPSS software, chi-square test was used to check the association and P value of 0.05 was said to be statistically significant. The pros of the survey are that the participants of all age groups were able to participate. Simple random sampling method was the sampling method used to minimize the sampling bias. The inclusion criteria for this study is participants from different age groups and the exclusion criteria is children's below 10 yrs and persons above 80 yrs.

RESULTS

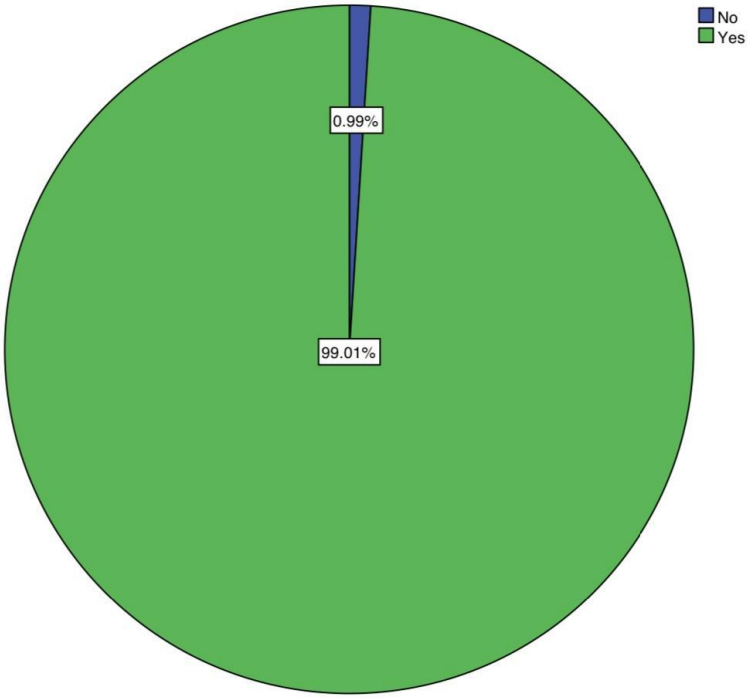

FIGURE 1 Pie chart represents the percentage distribution of the effect of music on blood pressure. 99.01% (green) of participants have said music has an effect on blood pressure. 0.99% (blue) of participants have said that music doesn't have an effect on blood pressure.

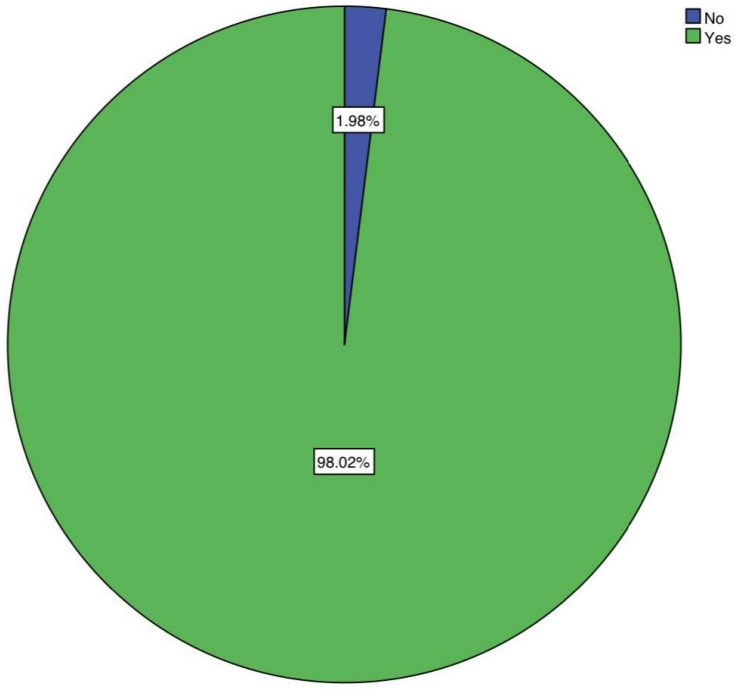

FIGURE 2 Pie chart represents the percentage distribution of the role of rock music in increasing blood pressure. 98.02% (green) of participants have said that rock music increases blood pressure. 1.98% (blue) of participants think that rock music doesn't increase blood pressure.

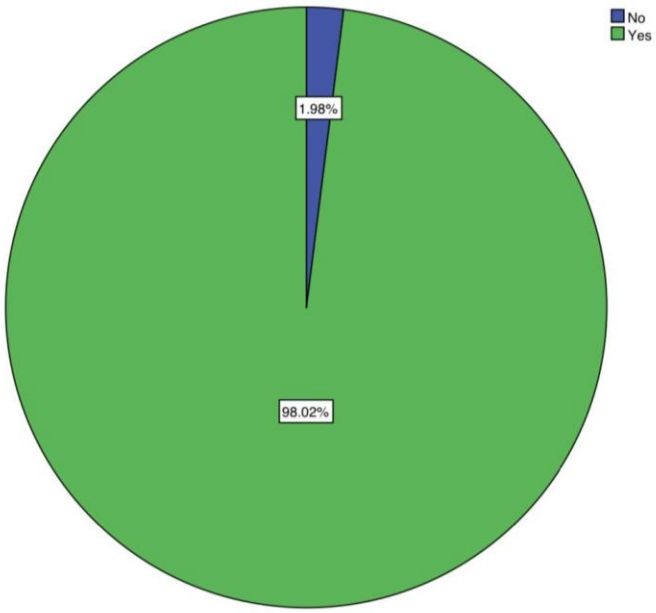

FIGURE 3 Pie chart represents the percentage distribution of the role of classical music in blood pressure. 98.02% (green) of participants have said that classical music has a role in blood pressure. 1.98% (blue) of participants have said that classical music does not have a role in blood pressure.

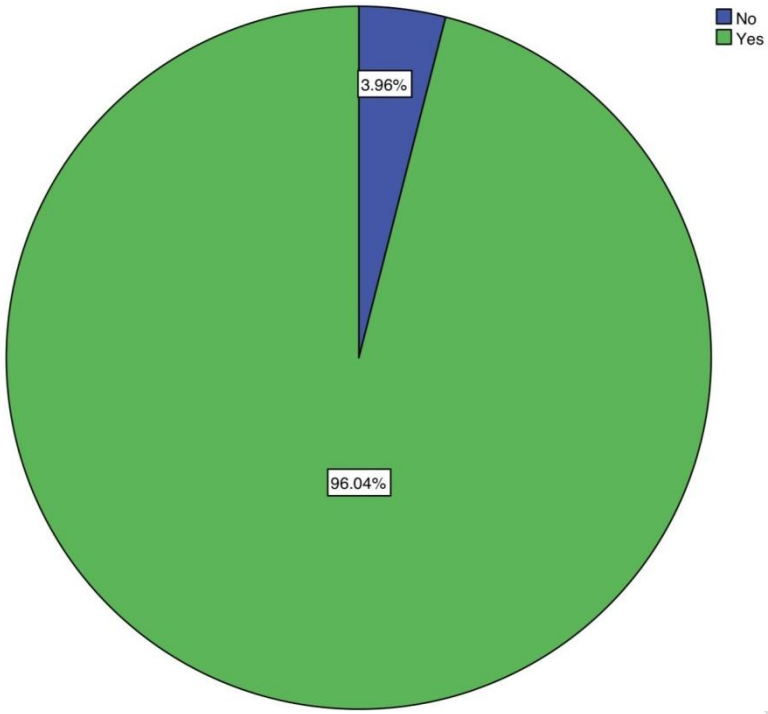

FIGURE 4 Pie charts represent the percentage distribution of the effect of hearing loud music. 96.04% (green) of participants have said that there is an effect of hearing loud music. 3.96% (blue) of participants have said that there is no effect of hearing loud music.

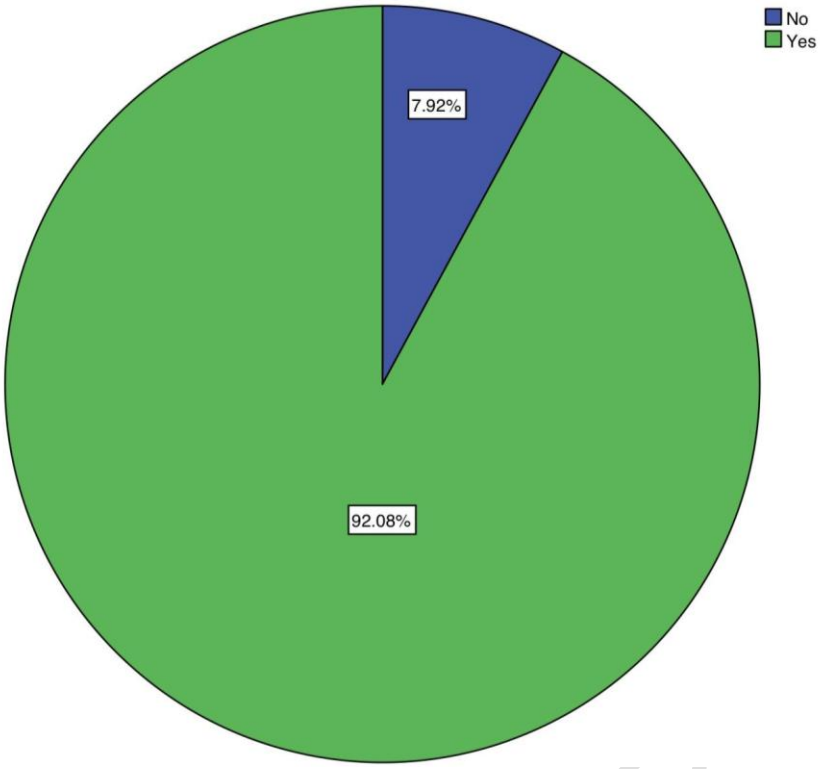

FIGURE 5 Pie charts represent the percentage distribution of the effect of music on the brain. 92.08% (green) of participants have said that music has an effect on the brain. 7.92% (blue) of participants think that music doesn't have an effect on the brain.

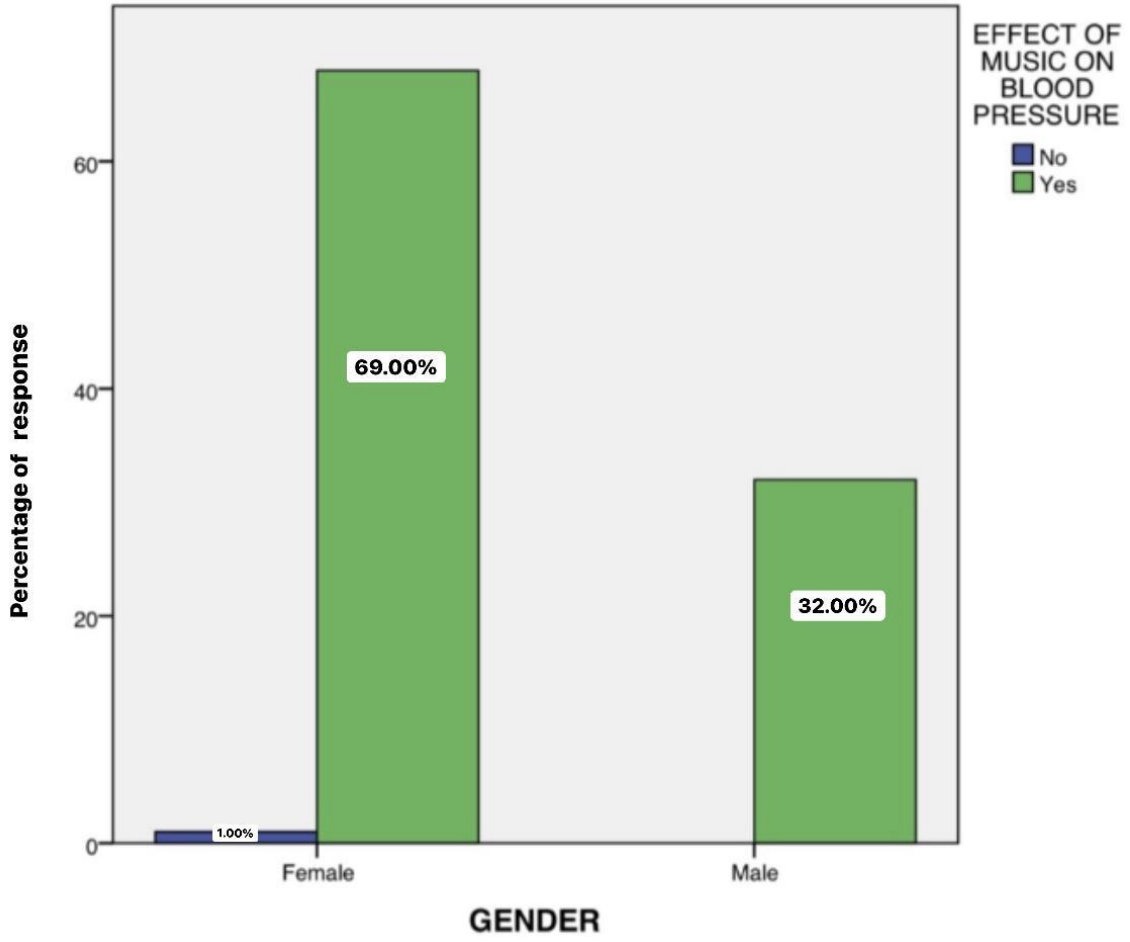

FIGURE 6 Bar graph showing association between gender and the effect of music on blood pressure. The X- axis represents the gender and the Y- axis represents the number of participants. 69% of females have reported yes and 32% of males have reported no. Blue denotes no and green denoted yes.Chi-square test was done and association was found to be statistically not significant. Pearson's chi square value: 0.468, p value : 0.494 (p>0.05) hence statistically non-significant providing females have better awareness than males.

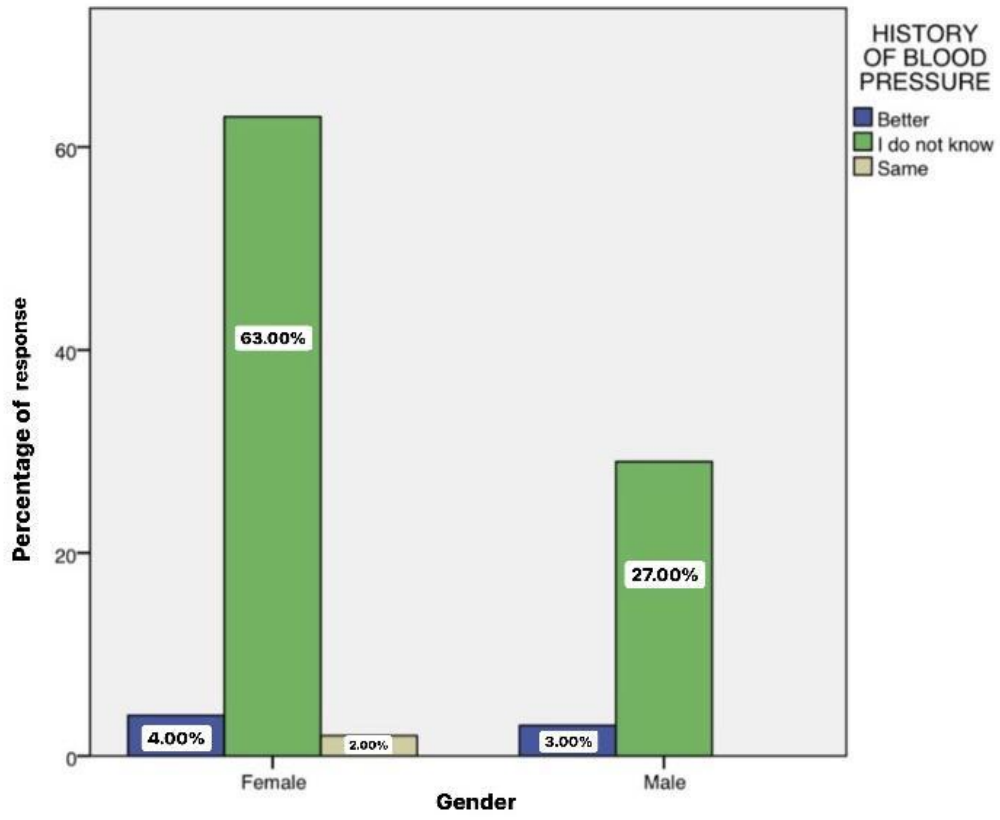

FIGURE 7 Bar graph showing association between gender and history of blood pressure. The X- axis represents the gender and the Y- axis represents the number of participants. 63% of females have told better and 27% of males don't know the histology of blood pressure. Chi square test was done and association was found to be statistically not significant. Pearson's chi square value: 1.332, p value : 0.514 (p>0.05) hence statistically non-significant providing females have better awareness than males.

DISCUSSION:

This current study results reveals 99.01% of participants have said music has an effect on blood pressure (Figure 1). 98.02% of participants have said that rock music increases blood pressure (Figure 2). 98.02% of participants have said that classical music has a role in blood pressure (Figure 3). 96.04% of participants have said that there is an effect of hearing loud music (Figure 4). 92.08% of participants have said that music has an effect on th(21)e brain(Figure 5). 69.00% of female participants have said that there is an effect of music on blood pressure. p value is found to be 0.94 (p>0.05) hence statistically non significant (Figure 6). 63.00% of female participants have told that their history of blood pressure is better. p value is found to be 0.514 (p>0.05) hence statistically non-significant (Figure 7).

This study examined the knowledge of people about music and its effect on blood pressure.The findings from the survey were different from other surveys. In the present survey 51.5% of participants like classical music whereas in another study 61.07% of participants like classical music. In our study 99.01% of participants think that music has an effect on blood pressure whereas in other studies (9). (22)52.31% of participants think that music has an effect on blood pressure (23). 92.08% of participants think that music has effect on brain and 7.92% of participants think that music does not have an effect on brain, whereas in another similar study 40.11% of participants think that music has effect on brain. 96.04% of participants have responded that there is an effect on hearing loud music and 3.96% of participants have responded that there is no effect on hearing loud music whereas in another similar study done 99.01% of participants have responded that there is effect on hearing loud music (24). In our study 96.04% of participants responded that music helps in reducing stress and 3.96% of people say that music does not reduce stress. Whereas in another similar study 98.01% of participants think that music helps in reducing stress (13).(25) In our study 99.01% of participants have responded that rock music increases blood pressure, 1.98% of participants think rock music does not increase blood pressure. In the present study 89.11% of people have a relative history of blood pressure and 10.89% of participants do not have a history of blood pressure. When we compare it to gender, females have more history of blood pressure than males. Whereas in another similar study 74.05% of participants have a relative history of blood pressure. (9).(26) In our study 96.04% of participants think that music reduces stress and anxiety and 3.96% of participants think that music does not reduce stress and anxiety. 88.12% of participants think that there is an impact of music on blood anxiety and 11.88% of participants think that there is no impact of music during anxiety. Females are more aware of the impact of music on anxiety than males. Whereas in another similar study (20 -27). 76.02% of participants think that there is an impact of music on anxiety (28-35). The limitations of this study is small sample size. The future scope of the study is to find out the effect of music on blood pressure among all age groups with proper data.

CONCLUSION

Listening to different types of music can reduce stress and anxiety. Listening to fast beat music is ineffective and often dangerous. Thus, listening to slow beat music can make us happy. Thus, music also has a beneficial impact on our health. Therefore we can conclude that different types of music have an effect on blood pressure.

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