

The Effects of Background Music in Speech Performance

Chelsie Chen

Supervisor: David Kristian Horman

SMA Cita Hati West Campus, Surabaya-East Java/Indonesia, chenchelsie03@gmail.com

Juara Harapan Category Psychology LPB Sosial Nasional 2019

1. Introduction

Speeches are used in many circumstances nowadays; from wedding openings, competition ceremonies, graduation events, to delivering new proposal plans on work and many more in our daily lives. With public speaking requirements all over the place, it means that the ability to deliver speaking have long-lasting effects on social skills, behaviour, education, and employment.

1.2 Problem

Ironically, based on Raja (2017) “75% participants admitted their fear of public speaking” which shows that it is a commonality to feel fear, or anxiety when in preparation of a speech. Additionally, the fear of public speaking is found to be a bigger concern in comparison of fear of death in a poll conducted by onepoll to rank a list of phobia fears.

Anxiety is primarily known as a natural response to stress which comes with symptoms such as increased heart rate, rapid breathing, restlessness, trouble concentrating, and difficulty falling asleep.

Music has been readily available since the discovery of rocks and sticks, with questionable origins and definitions. Thus, ethnomusicologists translates music as an organized cultural activity.

Interestingly, Williamson (2014) stated in her book that “Perhaps the most cited reaction to music that is associated with improved well-being is the relaxation response of the autonomic nervous system, which includes a variety of body markers such as lowering of heart rate, breathing rate, blood pressure, muscular tension and oxygen consumption.”

Therefore, it is intriguing to see whether playing background music can subconsciously

dampen one’s anxiety and improve performances.

The hypothesis in this research would be that background music will help lower anxiety levels and increase one’s performance.

If hypothesis were to be proven correct, it will help people who are grappling with speaking anxiety, or stage fright in general.

Less pressure upon them would lead to a healthier mental health, and encourage them to be more confident in speaking out within the public with music’s help.

With this, it can also mean better speech performances with one’s increased confidence and less fear.

Otherwise, music has also been known for prosocial behaviour after listening to uplifting music, according to North et al. (2004). By setting up background music and benefitting the speaker, the audiences might also keep a better impression of the speech and considerably get influenced, therefore causing the speech message to be well delivered.

2. Research Method

In order to conduct the research, Cita Hati students with age range of 14 to 16 were given an opportunity to volunteer over memorizing and addressing a speech. 30 people agreed, and were randomly assigned with the group which would either listen to background music or not, in order to eliminate selection bias. The music that was used in this experiment was an instrumental, could be searched with the keyword of “inspiring background music presentation” with 130 beats per minute.

2.1 Study Procedure

1. Partaker would be given briefing of what they had to do during the experiment.
2. Afterwards, they were given a miniature sized piece of paper in

- which they could take notes on and memorized a speech for 5 minutes
3. Then, participants filled in an anxiety test questionnaire
 4. Later, they would do the speech with a cut-off time* of 3 minutes.

*cut-off time: if 3 minutes have passed, stopwatch will be stopped and participants shall not be required to continue

Asking someone to memorize a speech is often a daunting task to do. Asking someone to create an improv speech in a matter of minutes or even seconds would be a nightmare. But letting them create their own speech and prepare days in advance, is an unsuitable notion to have considering the limited amount of time and general lack of willingness to even try to work on tasks or projects in school; unless they are required to work on it to chase for their grades.

However, if we provide participants to have complete access over the speech sheet while doing the speech, the majority would most likely not feel anxious due to the lack of pressure to perform. Thus, in fear of insufficient volunteers due to the requirement to put effort on memorizing the speech whilst making sure that they are grasping the topic, we provided a miniscule piece of paper resembling flashcards, approximately around A7 sized which participants are free to use and to bring onto the speech.

To assess one's anxiety, an anxiety test questionnaire is created in a form of likert scales with 22 questions: 20 questions regarding anxiety and another 2 for participant's name and class for data sorting. The use of likert scales were to increase the efficiency to compare between results by adding up the scale rating that participants selected. Anxiety test questionnaire was placed in-between speech memorization to assess anticipatory anxiety. Meanwhile, speech performances are scored and tallied by a scoring sheet which was created. Both anxiety test results and speech performance results are going to be the dependent variable of this experiment.

The data between participants which had background music playing or without background music would be directly compared to see whether there was a direct effect from the background music.

In order to make a fair experiment, a speech text, titled "Stress in Teens" which was written for participants to memorize which was used over all the experimentees. "Teens leads very stressful lives" was chosen as the speech topic due to its non-controversial or non-triggering nature of the subject. It consisted of 219 words excluding the title, and spent around 1.5 minutes when read out loud in a natural speed of reading. Since it was considerably short, 5 minutes was allocated for all participants to memorize and 3 minutes cut-off to prevent people from excessively talking, pause too long, and for maintaining a predictable schedule for each person's experiment session.

Most music psychologists often separate Introverts and Extroverts into different categories, but it is arguable that introverts' and extroverts' results will balance out each other as this is a randomized controlled trial and it has been found that roughly more than 50% of the population is an ambivert, who is a mixture of both an extrovert and an introvert. Furthermore, extroverts and introverts in the extreme spectrum shall generally balance out each other's results.

3. Results and Analysis

Quantitative data was collected as numbers of anxiety test results and performance test results. Anxiety test result was collected through an anxiety test questionnaire, whereas Performance test was scored from the scoring sheet.

3.1 Results

Below is the complete list of results that each participants achieved and their assigned group after being sorted.

| Participant Number | Anxiety Test Results (Max:) | Performance Test Results | With Background Music? |
|--------------------|-----------------------------|--------------------------|------------------------|
| | | | |

| | 100) | (Max: 30) | |
|----|------|--------------|-----|
| 1 | 50 | 23 | yes |
| 2 | 54 | 28 | yes |
| 3 | 41 | 25 | yes |
| 4 | 44 | 17 | yes |
| 5 | 28 | 20 | yes |
| 6 | 31 | 25 | yes |
| 7 | 47 | 18 | yes |
| 8 | 72 | 21 | yes |
| 9 | 41 | 23 | yes |
| 10 | 41 | 23 | yes |
| 11 | 57 | 23 | yes |
| 12 | 51 | 24 | yes |
| 13 | 34 | 22 | yes |
| 14 | 68 | 21 | yes |
| 15 | 46 | 21 | yes |
| 16 | 52 | 18 | no |
| 17 | 27 | 27 | no |
| 18 | 50 | 22 | no |
| 19 | 52 | 25 | no |
| 20 | 72 | 18 | no |
| 21 | 50 | 25 | no |
| 22 | 52 | 20 | no |
| 23 | 49 | 25 | no |
| 24 | 24 | 25 | no |
| 25 | 49 | 19 | no |
| 26 | 50 | 24 | no |
| 27 | 43 | 20 | no |
| 28 | 31 | 22 | no |
| 29 | 55 | 21 | no |
| 30 | 54 | 22 | no |

Table 1.List of participants and their anxiety results, along with their assigned group

Figure 1 shows that background music doesn't cause significant impact in participants' anxiety levels.

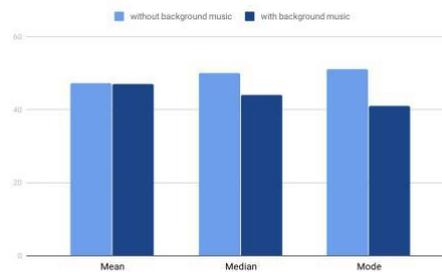


Figure 1. Compared mean, median, and mode of anxiety test results.

Figure 2 shows that speech performance does not alter with significance when background music is placed.

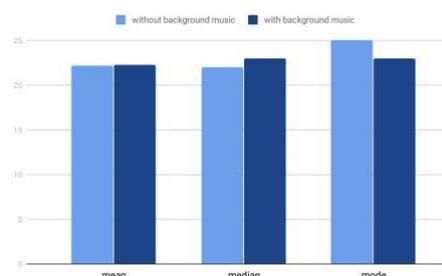


Figure 2. Compared mean, median, and mode of performance test results

All of these findings suggest that background music does not significantly improve their performance nor anxiety.

However, like every other research, this result has limitations. The first limitation would be that there was only one person who assessed this, since there was only a single person who is behind this research; therefore, only one person did the scoring and judging for every single person. Second of all this was that it is only tested within Cita Hati students. This means that results would only apply within the students, and might differ if done somewhere else. Which leads to the third limitation, that is the lack of sample size due to time restriction. If there were a bigger sample size, the results would be more reliable. Sadly, it is not an easy task to gather volunteers who are willing to attempt memorization as several people whom I offered mentioned that they do not have the confidence to memorize well; extra the limited time needed to work on this research leaves no choice but to have a small sample size.

Another consideration would be that this experiment was done in English. For most Cita Hati students, English is their second language, not first, therefore they might struggle in comprehending what they are supposed to do, or in understanding the speech.

Thus, in this experiment it can be deduced that there is still a questionable correlation between anxiety and background music or speech performance and background music.

4. Conclusion

This paper concludes by arguing that there might still be a possibility that the hypothesis is correct due to the limitations available in this experiment, although results shows that there is no significant effect on testing.

Perhaps it is possible to analyse whether this is applicable in different age groups in latter studies. As a topic that lacked any former studies, exploring different background music genre or beat per minute might also be an option in upcoming studies.

In further research, it is suggested to make sure to keep background musics' songs in a constant volume as different songs have different level of loudness.

References

North, A. C., dkk. *The Effects of Music on Helping Behaviour: A Field Study*. Environment and Behaviour., 2004

Raja, Farhan. *Anxiety Level in Students of Public Speaking: Causes and Remedies*.

Journal of Education and Educational Development., 2017

Vitkovitch, J. *Speech and language skills: their importance in development*. J Fam Health Care., 2008

Burgess, Kaya. *Speaking in public is worse than death for most*. The Times retrieved from <https://www.thetimes.co.uk/article/speaking-in-public-is-worse-than-death-for-most-512bvqjmbnt>, 2013

Holland, Kimberly. *Everything You Need to Know About Anxiety*. Healthline retrieved from <https://www.healthline.com/health/anxiety>, 2018

Bhargava, M, dkk. *Assessment of Personality Types in an Urban Community of District Dehradun, Uttarakhand using Introversion-Extroversion Inventory*. National Journal of Community Medicine., 2015

Walsh, Nils Lennart, dkk. *The Origins of Music*. London: The MIT Press., 2000

Williamson, Victoria. *You are the Music: How Music Reveals what it Means to be Human*. London: Icon books Ltd., 2014

Worley, Will. *These are the world's most ignorant countries*. Independent retrieved from <https://www.independent.co.uk/news/world/world-most-ignorant-countries-index-ipsos-mori-poll-survey-a7481196.html>, 2016