

Interactive Documentary: The Awareness of Music as Stress Reliever

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Abstract- This project focuses on the issue of mental stress experienced by final year undergraduate students. Specifically, this research was led to distinguish the relationship of mental stress with music treatment. In addition, the project shall analyze methods that can be utilized by students to address the mental pressure they experienced. The project's data was collected through interviews and survey. A total of 30 final year students participated in the survey. The research instruments were used to quantify the adequacy of music treatment in managing stress among students. The ADDIE model is the instructional design model that has been used in the study. Based on the result, 90% of respondents strongly agree that music can be a stress reliever. It is hoped that the outcomes can help address the issue of mental stress experienced by final year students.

Keywords: awareness, music, stress-reliever, interactive documentary

I. INTRODUCTION

An interactive documentary is a non-linear production that combines photography, text, audio, video, animation, and infographics focused on real-time material that is created using the internet. It may also change their path through the documentary depending on their reactions, which is a core aspect that gives this modern audio-visual genre its significance.

Stress is the body's method of reacting to a condition such as a threat, challenge or physical and psychological barrier. In psychology, stress is a feeling of emotional strain and pressure. Excessive amounts of stress, however, may lead to bodily harm. Stress can increase the risk of strokes, heart attacks, ulcers, and mental illnesses such as depression and also aggravation of a pre-existing condition.

A research conducted in Malaysia among undergraduate students showed that the prevalence of moderate to extremely severe level of stress ranges from 12.9% to 21.6% [1].

To cope with the negative consequences of stress, people usually turn to medication, which sometimes causes negative side effects. Thus, there is a pressing need to develop and test novel, non-pharmacological stress reduction method.

Music is an art form that pervades every human culture in some form or another. Music may also be used to convey

sentiment by incorporating vocal or instrumental sounds to create a beautiful form. There are rhythm, melody, and harmony principles in song.

Often, most people believe that music's sole function is to provide entertainment. However, music has been used as a treatment in patients suffering from peripheral tension, high blood pressure, and other ailments. Most of us simply listen to songs, unaware of the substance or soul of the record.

Thus, this interactive documentary will demonstrate and advise on how music can be used to manage and relieve stress. This study covers an introduction to stress, psychological stress, treatment and finally, the effects of music on stress.

II. RELATED WORK

A. Interactive Documentary

In the book "The Effect of Video," Madsen defines documentary as "a film of a convicting kind sincere, honest substance and candidate-nature cinematic techniques." [2]. Recently however, many examples of the documentary genre, sometimes referred to as "interactive documentaries" have been developed during the past few decades.

Interactivity reflects the freedom of users to access content via different paths of navigation as well as to skip material [3]. An interactive application lets user decide on their own path when exploring a particular issue or content. Interactive documentaries entered the field of health about a decade ago, and since then they have proven to be a worthwhile tool for exploring various health issues [4]. As such, it is a suitable way of propagating awareness of music's ability to reduce stress.

B. Music and Stress

Stress is a significant problem which causes temperament swings and loss of energy and interest. Listening to music is closely linked to relaxation due to a decrease in physiological arousal, as evidenced by lower cortisol levels, heart rate, and mean arterial pressure when listening to calming music, according to a research by deWitte in 2021[5].

Relaxation can also be induced by listening to music, especially when individuals choose their own music. The class of music respondents favored to relieve stress is also significant.

It is perceived from a survey by [6] that the class of music the respondents appreciate is Traditional Music (40 %), Pop (35 %), Collection dance (15 %) and Jazz (7 %).

In both physical and mental healthcare settings, music therapy is being employed more frequently as a stress-reduction strategy[7] as the study found evidence that music therapy can reduce stress and explains on music therapy's expanding use. However, the utilization of music treatment to improve passionate wellbeing should be perceived is that music doesn't completely fix sorrow, however rather to settle oneself [8].

C. Case Study

A good interactive documentary is well-designed, runs smoothly without interruptions, and provides easy, concise content. This study looks at multimedia-based personal health care, support, and advice documentaries and interactive video. The study aids in learning about each project in greater depth at the same time. Many immersive online documentaries or documentaries can be found on YouTube or website

Out of the three case studies, only case study 2 is the only video with interactivity. However, it is also the only one without subtitle which makes it harder to understand especially when the narration is too fast or the accent is difficult to grasp. Nevertheless, case 2 is the primary reference to this project due to its interactivity features and the use of background music, narration and sound effects which adds to the appeal.

- Case Study 1: Recognize Depression

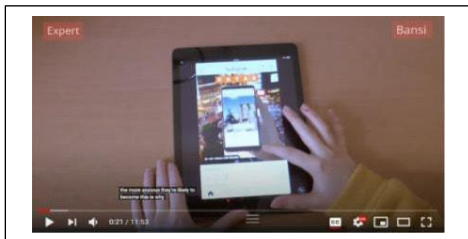


Fig. 1 Documentary about depression.

TABLE 1. STRENGTH AND WEAKNESSES OF CASE STUDY 1

Strength	Weakness
This video has good composition and camera angles for the interview.	Not have an interactive animation.
Have a subtitle on this video.	Do not have sound effect.
Good information about depression.	

- Case Study 2: Student with Mental Illness

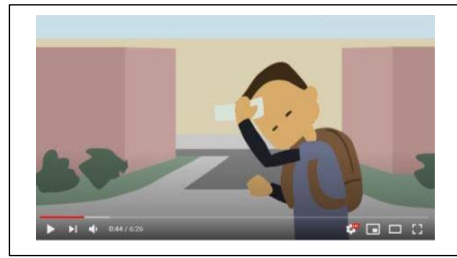


Fig. 2 Interactive video of Student with Mental Illness

TABLE II. STRENGTH AND WEAKNESSES OF CASE STUDY 2

Strength	Weakness
Very informative. Information given in great depth.	The video does not have subtitle.
Sound effect is clear	This video does not have a voice over or narration.
Contains interactive animation and give lesson to audience.	

- Case Study 3: How stress affects your body?

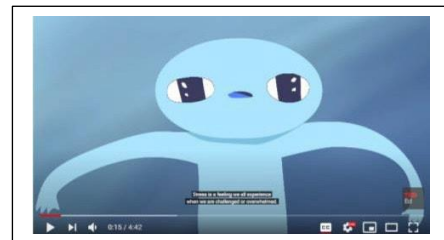


Fig. 3 Video of how stress affects your body

TABLE III. STRENGTH AND WEAKNESSES OF CASE STUDY 3

Strength	Weakness
Use 2D animation and graphic	Colors are a little flat.
Sound effect and voice over are very clear.	
Simple and minimalistic concept and theme	

III. METHODOLOGY

A. Respondents

This study focused on final year students from University of Malaya participating in a doctoral or medical service programs, all of which are very difficult for students due to competing assignments.

This interactive documentary can motivate students to use and manage stress effectively, as well as pique their interest in songs with various other genre so that they are not bored.

B. Data Gathering

Interviews were also conducted with Dr Amir Hussairi Bin Mohd Razi, a psychiatrist from KLINIK ANSAR and Mr.Shahrizal Bin Jaapar, a music lecturer from ASWARA to learn more about stress and music therapy. Researchers won't be able to track down this knowledge online, so these interviews have provided a lot of information to the research.

C. Research Methodology

The ADDIE model was used as the instructional design model in this study. It is one of the most commonly used models by designers and it serves as a guideline for achieving effective project outcomes. The model facilitates researcher in achieving the objectives by delivering high-quality documentary video while also helping to complete projects on time.

The Production Process pipeline as can be seen in Fig. 4 [9] is also used in the production of the interactive documentary. The documentary production is split into three phases prior to its final product which are Pre-Production, Production and Post-Production.

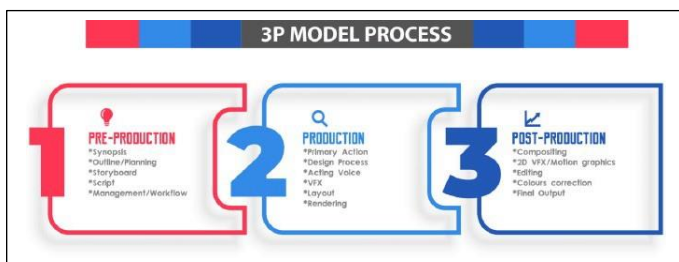


Fig 4. The interactive documentary production process pipeline

• Pre-Production

Fig. 5 visualize the project mind map that illustrate the components inside the "Interactive Documentary Awareness of Music as a Stress Reliever" its function and what it will include.

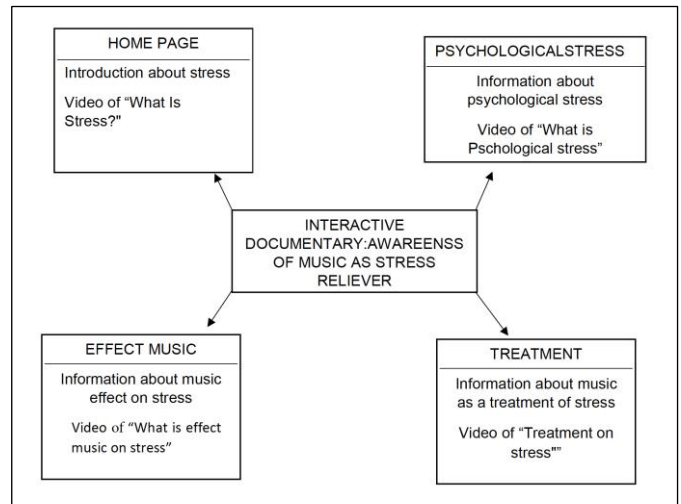


Fig. 5 Segments of the Interactive Documentary project

• Production

The four documentary segments were shot in the production phase. Interviews were conducted with Dr Amir Hussairi Bin Mohd Razi, a psychiatrist from KLINIK ANSAR and Mr.Shahrizal Bin Jaapar, a music lecturer from ASWARA as can be seen in Fig. 6 and 7 below. Each subject matter expert interviews were incorporated into two documentary segments as depicted in Table IV.



Fig. 6. Dr Amir Hussairi explaining about stress



Fig. 7. Mr.Shahrizal explaining about music therapy

TABLE 4. INTERACTIVE DOCUMENTARY SEGMENTS

Subject Matter Expert	Segment
Dr Amir Hussairi Bin Mohd Razi	Stress
Dr Amir Hussairi Bin Mohd Razi	Psychological Stress
Mr.Shahrizal Bin Jaapar	Music therapy treatment
Mr.Shahrizal Bin Jaapar	Effects of music on stress

• **Post Production**

During post production, the design of the interface, context environment, buttons, and characters were done in Adobe Illustrator CC 2020. Character animations were done using Adobe After Effects CC 2020 to edit the infographic and to import audio into the software. As for the interview videos, they were edited in Adobe Premiere Pro CC 2020. Finally, all video segments were combined in a website so all the information on stress and music can be found in one place.

The screenshots of the main segments in the interactive video can be referred in Fig. 8 to Fig. 12 below.

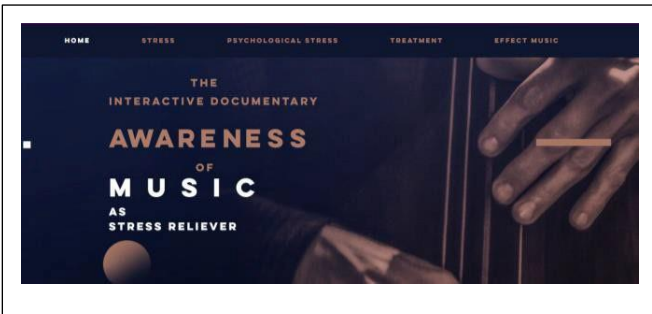


Fig. 8. Homepage of the Interactive Documentary

Fig. 9 is the screenshot of the Stress segment where Dr. Amir Hussairi explains about stress in general.

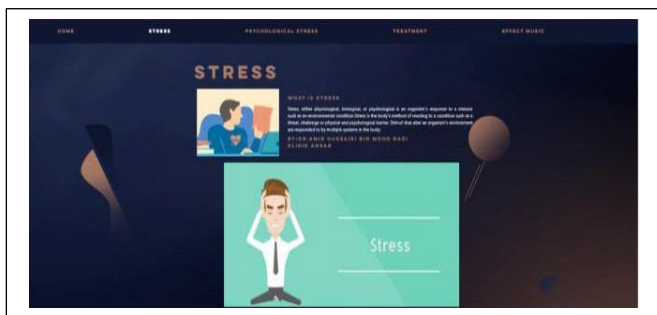


Fig. 9. Stress page

Fig. 10 is the screenshot of the page where Dr. Amir Hussairi specifically explains about Psychological stress.

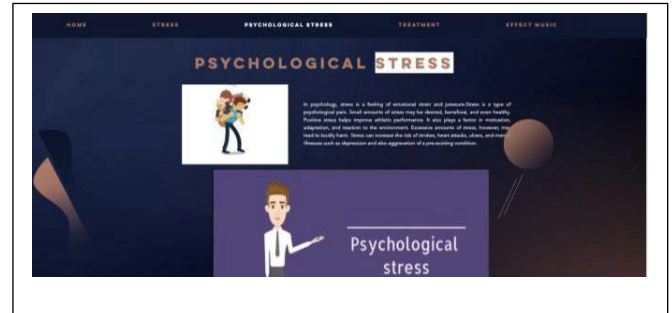


Fig. 10. Psychological stress

Fig. 11 is the screenshot of the Treatment page. In this page, Mr Shahrizal explains about the music therapy treatment for stress.



Fig. 11. Treatment

Finally, Fig. 12 is the screenshot of the last segment in the interactive documentary. Mr Shahrizal explains about the effects of music on stress in this page.

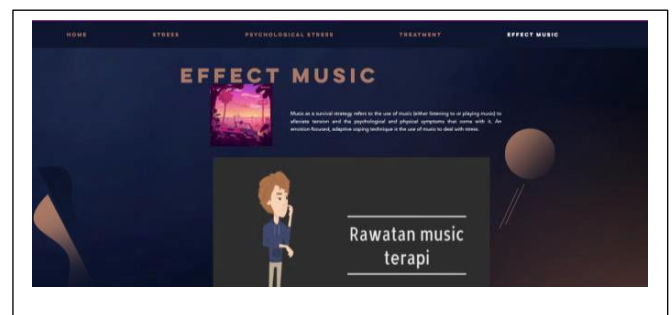


Fig. 12. Psychological stress

All the pages in the website were designed using a soothing color palette of earthy tone colors. In addition, the color of the button varies when the user presses it, allowing the user to see which page they are at the moment. As for the typeface, sans serif family fonts were used to make the website to increase readability for the users.

IV. TESTING AND RESULTS

There are two types of testing conducted, alpha testing and beta testing. The alpha test aims to address the vulnerabilities in the website. Thirty users between the ages of 19 and 30 were selected to test this interactive documentary, which can be accessed through the researcher google drive account, and completed the online questionnaire.

A. Section A : Demography

For the demography, 53.3 percent of female and 46.7 percent of male respondents completed the survey. 53.3% of respondents are Bachelor students, 20% from Diploma, Masters 16.7% and PHD 3.3%.

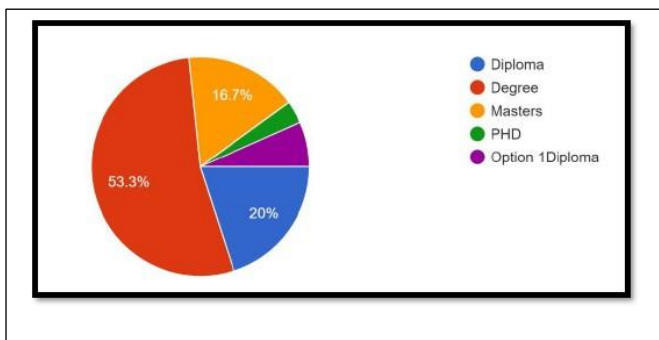


Fig. 13. Demography

B. Section B : Project Content

Fig. 14 shows that 90% of users believe that music can help them deal with stress and in Fig 15, 80% of these users consider using music therapy for tackling stress.

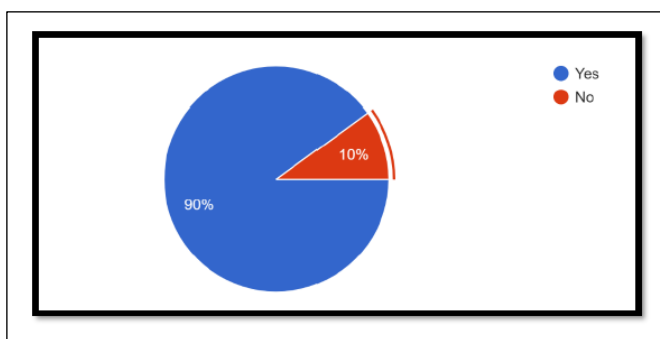


Fig. 14 Does music help you to deal with stress?

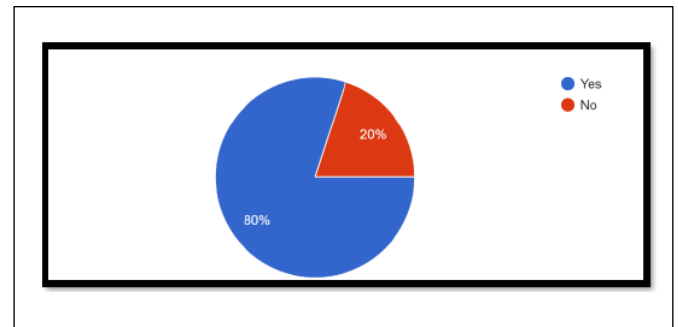


Fig. 15 Will you consider using free music therapy for tackling stress?

C. Section B : Effectiveness of the Interactive Documentary

According to Fig. 16, 24 out of 30 respondents believe that the interactive documentary is an effective platform to spread awareness. The vast majority of respondents, believe that the website may help people by providing stress-related information and music-based treatment.

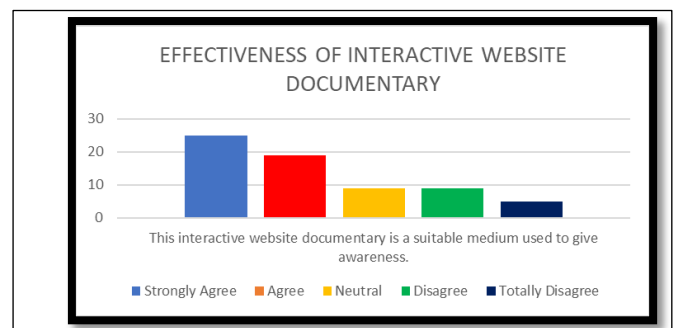


Fig. 16 Will you consider using free music therapy for tackling stress?

27 respondents out of 30 in Fig. 16 were motivated to know more about music therapy for stress relieve after watching the interactive documentary.

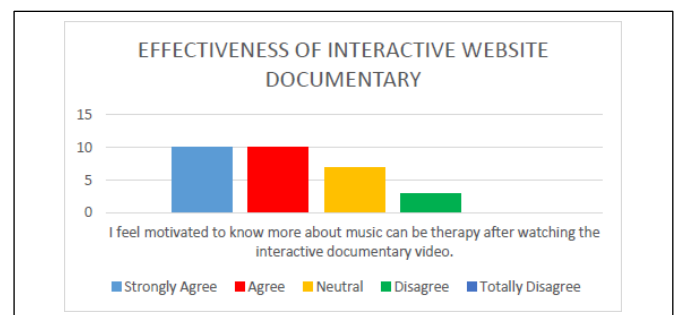


Fig. 17 I feel motivated to know more about music therapy after watching the interactive documentary

Generally, the documentary is recommended by the majority of respondents because it offers convenient accessibility to information on music as stress reliever. Besides that, based on the results, the project fulfilled the project's goals, with a positive response to the questionnaire on the effectiveness of stress awareness and stress management using music.

V. CONCLUSION AND RECOMMENDATION

Music therapy is usually aimed toward minimizing or feelings that occur in reaction to stress. In essence, music therapy has been seen time and time again to reduce stress and anxiety effects over time.

For this project, researcher has created an engaging interactive documentary with the hopes of reaching a large number of people to deal with stress. This project shows how music can be used as a therapeutic tool. In terms of effectiveness, the interactive documentary has been proven to be a suitable platform to spread awareness. This is also due to the documentary aiding the user in remembering the details with the use of animated infographics as they go through with the practical work of this application.

As for future improvements, the documentary's infographic can be improved by using 3D animation as well to attract the user's attention and make the video more engaging. Secondly, since not everybody can read and understand English, the website should be also be bilingual so that a wider range of audience can be reached. Future research however, should increase the number of respondents and include additional age groups and types of musical experiences to extend the confidence in the results of this study.

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