

SHORT COMMUNICATION

## Stress Intervention Among University Students: Online Medical Tune Competition

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### ABSTRACT

This innovative health intervention aimed to reduce stress among university students through interaction with music and developing awareness of the effect of music in stressful situations such as the current COVID-19 pandemic. The setting for this intervention was an online Instagram community with Universiti Malaysia Sabah (UMS) students as participants. For research, a cross-sectional observational health promotion design was used for this online health intervention, in conjunction with the Diffusion of Innovation Theory. The Medical Tune Competition was open to students from all university faculties. Process evaluation was done using the RE-AIM framework, while impact evaluation was conducted via a non-experimental post-test only design. A Google feedback form was distributed to the participating students, and descriptive analysis was performed using SPSS version 26. In total, 21 contestants participated whereby 85% of the feedback responses indicated that the programme had been enjoyable. All respondents were made aware that music could make them happy, and they stated that they would advise their friends or relatives to sing or enjoy music when stressed, 90.5% of the respondents felt music helped them relieve stress ( $4.43 \pm 0.67$ ), 85.7% believed that the Instagram platform was appropriate for this contest, and 14.3% suggested using Facebook or YouTube as a platform. The conclusion was that an online music competition held during the COVID-19 pandemic could be adopted and likely to be effective in raising awareness of music for stress management. In the future, innovators could develop and grow their own innovative e-health intervention programmes modelled on the Medical Tune initiative.

## INTRODUCTION

At the beginning of 2020, the world first became aware of the SARS-CoV-2 when it emerged in Wuhan, China, and spread globally, creating a pandemic in only a few months. It also spread to Malaysia, and preventive public health measures have been applied to develop behavioural and environmental changes to break the transmission of SARS-CoV-2 through aerosol droplets. The Movement Control Order (MCO) was brought into effect on 18th March 2020. This intervention was an opportunity to create an innovative idea utilising the potential of music to control stress during the COVID-19 pandemic. The soothing power of music is well-known: it has a unique link to our emotions and thus could be an extremely effective stress management tool. Listening to music can have a tremendously relaxing effect on prolonged and gentle classical music on our minds and bodies. Music can act as a powerful stress-relieving tool in our lives (Collingwood, 2016). It is a remedy for the worries and woes of daily life. Recently, scientific studies encourage coordination and communication and improve the quality of life. Listening to music on headphones reduces stress and anxiety in hospital patients before and after surgery (Collingwood, 2016). In addition, the practice can relieve depression and increase self-esteem. Actively making music can reduce burnout and improve mood among nursing students. It can also help us focus on tasks by relaxing our minds and allowing our subconscious to manage some of the work (Cockerton & Moore, 1997). When jazz musicians improvise, they are typically in a flow state, channelling inner emotions and rendering them into a beautiful melody (Deepak & Kabir, 2017). Diffusion of Innovation Theory was used in this community-level intervention. The theory states how innovation is communicated through specific channels over time among members of a social system (National Cancer Institute, 2003). Loneliness directly impairs the immune system, making us less resistant to diseases and infections.

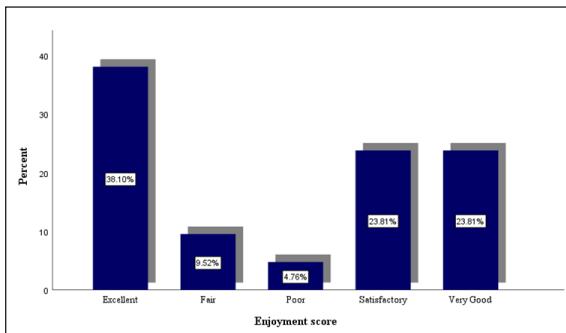
Indeed, feeling lonely and having few friends can result in an inferior immune defence system (Danilo, 2020).

There was an increase in the number of complaints and causes of stress and anxiety noted in on-campus clinic records during the MCO period. Some students went back to their hometowns and studied from home via online learning. Both categories of students experienced similar levels of stress during the pandemic. In this intervention, music was promoted as a tool for relieving stress and loneliness, staying healthy, and ensuring mental wellbeing with the slogan "Music is a remedy for the worries and woes of daily life." The event was titled "Medical Tune Competition." The competition was designed to enhance the awareness of the power of music to counter stress or loneliness during the COVID-19 pandemic by implementing an online medically-themed tune competition from 25 May 2020 to 9 June 2020. The RE-AIM framework evaluated the process, quality, and impact of the intervention by a non-experimental post-test only design. The competition was open to students from all UMS faculties. The announcement was posted to all university students with access to the Da Vinci Club Instagram account one week before the event. The number of 'likes' for all the videos was recorded, with winners for this category then chosen. Time was given for the judges to select the winners for the Judges' Pick category.

After evaluating the post-intervention online feedback responses, it was clear that the desired outcome had been achieved. Good leadership, teamwork, commitment, technical proficiency, and attractive prizes are required to sustain the programme effectively.

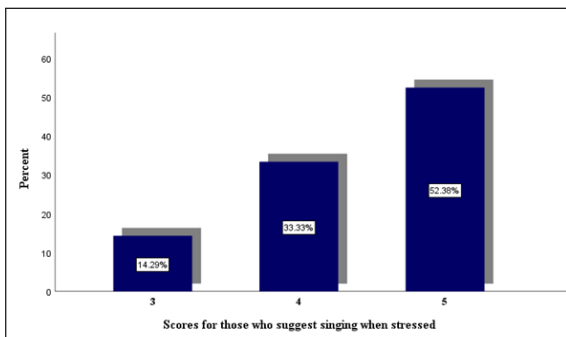
A non-experimental post-test-only design was used for the impact evaluation on a scale of 1 to 5, indicating the lowest to highest score. The results showed that 71.4% of the respondents were contestants, and

66.7% were from the Faculty of Medicine and Health Sciences (FMHS), among seven other faculties at the university. While 85% of the respondents responded that the programme was delightful (Figure 1), all affirmed that they were now aware that music could make them happy and that they would sing or play songs whenever they were under stress.



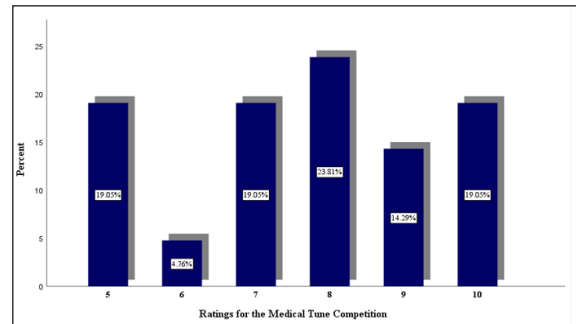
**Figure 1** Distribution of respondents according to the enjoyment of the Medical Tune Competition

Furthermore, they agreed to advise their friends or relatives to sing or enjoy music when stressed ( $4.38 \pm 0.75$ ) (Figure 2).



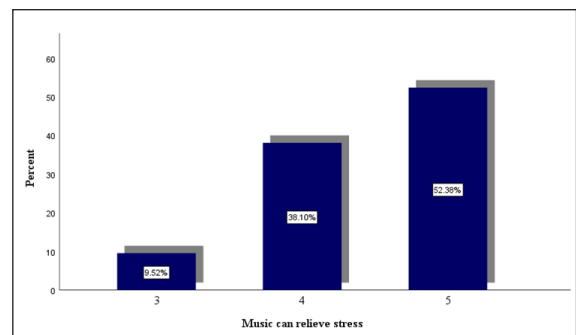
**Figure 2** Distribution of respondent scores according to who would suggest to their loved ones to sing when stressed

In addition, 95.2% of the respondents agreed that music influenced their health and wellbeing. A significant 76% rated the Medical Tune Competition 2020 highly on a scale of 1 lowest to 10 highest ( $7.67 \pm 1.74$ ) (Figure 3).



**Figure 3** Distribution of respondent ratings for Medical Tune Competition

85.7% of the respondents thought that the Instagram platform was suitable for this contest, although 14.3% suggested Facebook or YouTube as a viable alternative. In addition, 90.5% stated that music helped them to relieve stress ( $4.43 \pm 0.67$ ) (Figure 4).



**Figure 4** Distribution of responses to the statement that 'music can relieve stress'

Most of the feedback suggestions were positive (Table 1).

**Table 1** Suggestions and positive feedback from participants.

1. This year was excellent! Online makes it less nervous about performing.
2. So far, so good.
3. The period of this competition would have been longer.
4. Keep it up.
5. Increase the time limit.
6. Overall, okay.
7. Maybe we can extend the video duration by more than 1 minute.
8. If you want to conduct online such as on Instagram, it is better to set a much longer time limit. One minute is too short for those playing instruments.

9. No, but I to say that live performance is better.
10. Shorter the competition day.
11. For live performance, I hope we will be using a better sound system (good mic, enough speakers, well-adjusted amplifier) and an excellent venue. If the future competition is conducted online, I suggest using Facebook as the platform. I think that's all I can offer for this competition. Thanks.
12. Make sure to be strict on rules. Some competitors use things that shouldn't.
13. I realized that some of the participants did not follow the rules and regulations as the time taken for video shoots exceeded the rules given.
14. Post the video on the same date.
15. Shorter the competition day.

The majority of the respondents agreed that music influenced their health and wellbeing. In addition, almost all respondents stated that music helped them relieve stress. Our findings support those of a study that concluded that music had therapeutic stress-reducing effects: although the effect sizes were small and variable, the results indicated that listening to music and musical improvisation could positively impact aspects of mood even in a short 5-minute intervention (Fallon et al., 2020). All participants affirmed that they were more aware that music could make them happy, and they would sing or play songs whenever they were under stress. Furthermore, they agreed to advise their friends or relatives to sing or enjoy music when stressed.

## CONCLUSION

The format of the online music competition/health intervention conducted during the MCO period of the COVID-19 pandemic can be replicated and be effective in raising awareness that singing, listening to music, and playing musical instruments are ideal forms of stress management. This innovative health intervention was developed to translate public health intervention and health promotion research into real-life practice. In the future, innovators can create their own innovative e-health intervention programmes based on the Medical Tune Competition.

## CONFLICT OF INTEREST

The authors declare that they have no competing interests in publishing this article.

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