

# Bespoke Music - Narration for Mental Health Using Progressive Muscle Relaxation in COVID-19 Times

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## ABSTRACT

*The COVID-19 pandemic has changed the global landscape of life leaving indelible vicissitudes wherever it strikes. The World Health Organisation reported over 48 million cases of infections and 1.2 million deaths in less than eight months since the outbreak was declared a pandemic in March 2020. Repeated national and regional lockdowns, job losses, isolation, marginalisation, deteriorating health conditions and a sense of uncertainty and helplessness among wide facets of societies have exerted unprecedented economic and psychosocial damage. Its toll on mental health is recognised as one of the major challenges affecting global communities. Innovative healthcare services are much needed. This study aimed to promote mental health by creating and using electroacoustic music and pulse-based narration of instructional scripts premised on muscle relaxation techniques. An interdisciplinary practice-based methodology was adopted whereby a novel conceptual framework was designed and applied. The outcome of the study was the creation of Bespoke Music and Narration for Mental Health available both in the English Language and Malay Language. Positive feedback was reported from an experiential session by twenty-nine healthcare workers to gauge the clarity of the instructions and the effectiveness of the music with pulse-based narration in promoting relaxation.*

**Keywords:** *Bespoke Music-Narration; COVID-19; mental health; progressive muscle relaxation*

## **INTRODUCTION**

The World Health Organisation (WHO) reported on 14 May 2020 that mental health issues must be treated as a collective responsibility of governments and civil society in its response to and recovery from the COVID-19 pandemic in order to avert a global mental health crisis (World Health Organization, 2020). Music is a universal language and world-renowned musicians have been invited to speak about motivation at the World Mental Health Day on 10 October 2020 (World Health Organization, 2020). Recognition, rehabilitation and research are keywords in addressing the long-term effects on patients who suffered from the COVID-19 infection. The pandemic has changed the global landscape of life leaving indelible vicissitudes wherever it strikes. Its toll on mental health is already recognised as one of the major challenges affecting global communities (Ho, Chee & Ho, 2020). Repeated national and regional lockdowns, job losses, isolation, marginalisation, deteriorating health conditions and a sense of uncertainty and helplessness among wide facets of societies have exerted unprecedented damage to economic, psychosocial and societal norms. There are concerns that the coronavirus may shut down the immune system's vital germinal centres where a person can become reinfected with SARS-CoV2. As nations race to develop, test and market the much coveted COVID-19 vaccine the race to find an effective vaccine is one of the most eagerly sought-after medical achievement bringing with it unprecedented political and economic symbolism in modern times (Grahm, 2020). Then, in defiance of scientific advice, there are communities who choose not to adhere to public health guidelines, likened to a moral equivalent of a tragedy of the commons by self-defeating attitudes which undermine the pursuit of the greater good. Extraordinary deviant behaviour include COVID-19 parties and mass gatherings where attendees ignore safety guidelines, refuse to wear masks or adhere to social distancing. Is society facing a 'new norm' of impulsive self-destructive anxiety disorders associated with mental disorder that will impact on Post- COVID-19 recovery attempts? Meanwhile, depression and mental health issues have spread among facets of society from youths, adults to the elderly, not to mention dedicated frontline healthcare workers (Rajkumar, 2020; Kang et al., 2020).

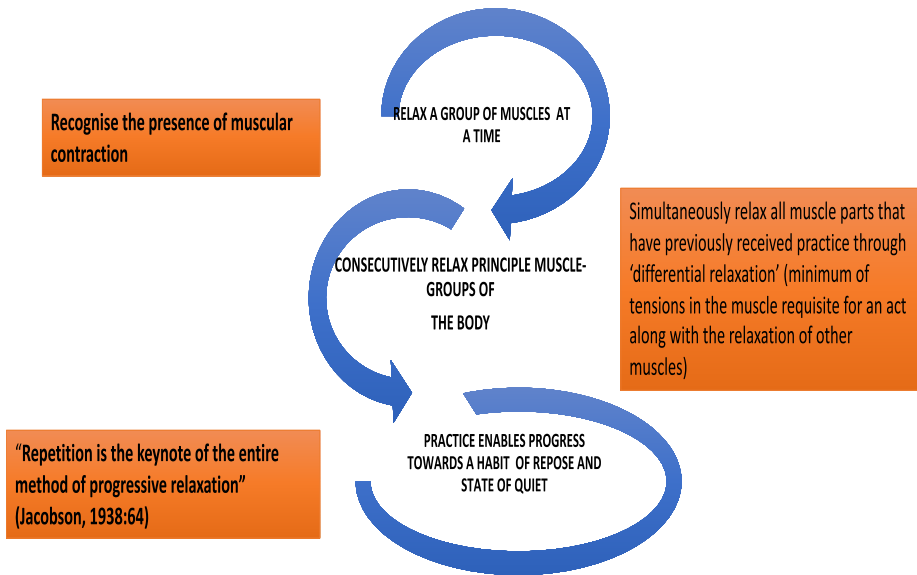
This study responds to calls for innovative services and solutions outside the conservative framework to address growing mental health concerns in the new norm facing COVID-19 societies. It extrapolates the creation of a novel approach using bespoke music and narration in progressive muscle relaxation to promote mental health. An interdisciplinary practice-based methodology was adopted, resulting in the creation of a novel framework which embodied the conceptual idea. This framework was then realised. The first output involved the crafting of progressive muscle relaxation scripts in the English Language and Malay Language. The second output is the composition and recording of original music to enable pulse-based narration of the scripts. Finally, an experiential session to gauge the clarity of the instruction and the effectiveness of the music and narration in promoting relaxation towards supporting mental health in COVID-19 times was conducted with feedback from participants reported.

## **PROGRESSIVE MUSCLE RELAXATION AND MUSIC FOR MENTAL HEALTH**

Introduced by American physician Dr Edmund Jacobson (1938), progressive muscle relaxation (PMR) is an established non-pharmacological method of deep muscle relaxation which involves alternating tension and relaxation in all of the body's major muscle groups, thereby relaxing the mind and body to create a feeling of well-being by lowering blood pressure, decreasing muscle tension and reducing anxiety (Feldman, Greeson & Senville, 2013; Vancampfort, et al., 2013). A form of cultivated natural relaxation with a clear physiological basis, the principles and techniques of progressive muscle relaxation are summarised in Figure 1.

Music is a powerful communicative tool. Scientific studies have shown that music listening enhances the well-being of humans and it has been used as effective intervention in clinical and non-clinical settings (Carr Odell-Miller & Priebe, 2013; Yinger & Gooding, 2015; Kim & Stegemenn, 2016) Music can help alleviate pain and anxiety during medical procedures, improve mental health, promote mindfulness and sensory integration (Miranda et al., 2012; Dunbar, Kaskatis, MacDonald & Barra, 2012; Ross, 2017). This study is novel in its application of specially composed music for progressive muscle relaxation scripts which were narrated to the pulse of the

music and recorded in a digital format, thereby promoting accessibility, usability, consistency and user-empowerment.



**Figure 1: Principles and Techniques of Progressive Muscle Relaxation as expounded by Edmund Jacobson**

## **INTERDISCIPLINARY PRACTICE-BASED METHODOLOGY : NOVEL FRAMEWORK**

Practice-based research represents an original investigation undertaken to gain new knowledge both by means of practice and the outcomes of that practice. It incorporates the creative artefact as a basis of contribution to knowledge (Candy & Edmond, 2018; Ross, 2018). This study embodies the interdisciplinary domains of arts-science research-in-practice in designing an innovative framework upon which the purpose of the study was met. Figure 2 illustrates the creation of a novel framework of bespoke music and narration to promote relaxation and mental health.

The framework was premised upon Jacobson’s concept of cultivated natural relaxation and the influence of relaxation upon mental

activities. It begins with deep breathing exercises. This is followed by the progressive tensing and relaxing of targetted muscle groups from face muscles, neck and shoulder muscles, hand and arm muscles, upper and lower back muscles and finally, whole body muscles. These instructions were scripted. Original (Bespoke) electroacoustic music with a gentle underlying tempo was composed to enable a novel ‘pulse-based narration’ of the scripts. The music and narration was recorded in MP3 digital format. A spectral analysis of the audio recording was made to illustrate its sonic qualities.

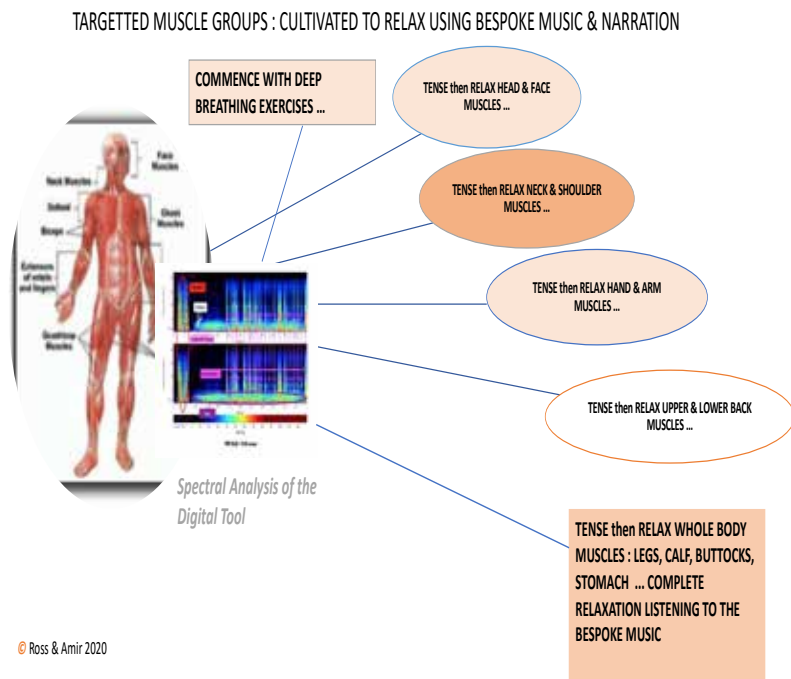


Figure 2 : Novel Framework to Promote Relaxation

## RESULTS AND DISCUSSION

The results of this study are presented as three outputs. The first output is progressive muscle relaxation scripts crafted in the English Language and Malay Language. The second output is the crafting of bespoke music and

narration which was then recorded. The third output is the analysis of feedback from twenty-nine healthcare workers who gauged the clarity of the instruction and the effectiveness of the audio tool in promoting relaxation.

**Output 1: PMR Scripts in Two Language Options**

Table 1 illustrates the opening of the progressive muscle relaxation scripts crafted in English and in Malay. This will enable preferred language options for users, thereby encouraging cultural affinity, inclusivity, instructional understanding and widening accessibility.

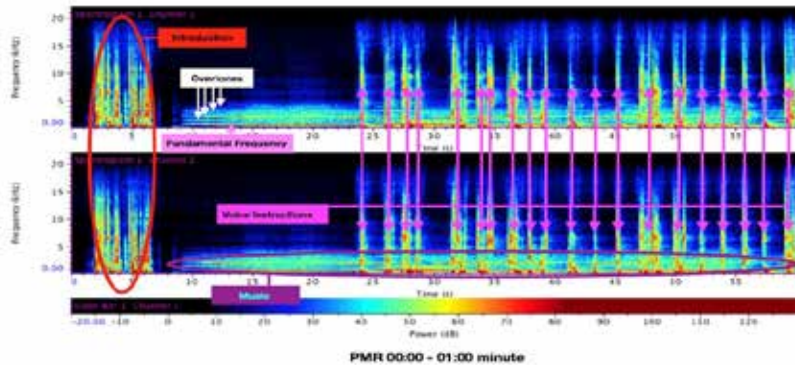
**Table 1: Sample of Progressive Muscle Relaxation Instructions for Pulse-Based Narration in English Language and Malay Language**

	<b>English Language Instruction</b>	<b>Malay Language Instruction</b>
Excerpts of progressive muscle relaxation instructional scripts focusing on 'local' and 'general' muscle-groups and narrated in two languages as options for users.	[Breathing] We begin with deep breathing. Breathe slowly through your nose - take a slow deep breath, now hold: 1-2 Slowly exhale through your mouth: 1-2-3-4-5 Allow yourself to be completely relaxed. One more time... [Head and Face Muscles] Tense your forehead by raising your eye-brows, hold the tension: 1-2-3-4-5 Now release and allow all the tension to gradually leave your forehead. Once again...	[Pernafasan] Kita bermula dengan nafas panjang Tarik nafas perlahan-lahan menggunakan hidung .Tahan nafas: 1-2 Hembuskan nafas melalui mulut: 1-2-3-4-5. Tenangkan diri anda. Ulang sekali lagi... [Kumpulan Otot-Otot Kepala dan Muka] Tegangkan dahi anda dengan menolakkan kening keatas. Kekalkan ketegangan:1-2-3-4-5 Kendurkan dahi anda. Rasakan ketegangan di dahi anda mula hilang. Ulang sekali lagi ...

**Output 2: Bespoke Music and Pulse-Based Narration**

PMR instructions and the original musical composition were recorded in a professional recording studio by the authors. These two elements were then combined to create the thirty-minute audio tool. The first twenty-minutes comprise of music and PMR narration followed by the last ten-minutes comprising of music only. The audio recording was then mixed and

mastered and transferred into MP3 format. A spectral analysis of the audio recording using Raven-Pro (2020) sound analysis software was carried out to illustrate how the regular pulse-based voice narration synchronized rhythmically with the music in creating a calm and relaxing sonic atmosphere.



**Figure 3: Sonic Spectrum of Bespoke Music-Narration**

Figure 3 illustrates an analysis of the opening sonic spectrum of Bespoke Music-Narration. The frequency (Hertz/Hz) is displayed at the vertical axis while the time (sec) is shown on the horizontal axis. The volume/power (decibel/dB) is represented by a colour bar at the bottom of the spectrogram with the intensity of sound in terms of volume (dB) ranging from cool to hot (blue to red). Overall, the snapshot of the spectrum shows more cool colours reflecting the soporific and calming nature of the music. The evenness of the arrowed vertical spikes rising and peaking rhythmically above the music demonstrate the effectiveness of the pulse-based narration. To sum up, these spectral features offer visual, acoustical and artistic insights into the compositional techniques that were employed in creating the desired music and narration to promote mental relaxation.

### **Output 3: Gauging Instructional Clarity and Relaxing Qualities of The Innovation**

Twenty-nine healthcare workers participated in gauging the effectiveness of this novel approach in promoting relaxation. The session was thirty-minutes in duration held at the UiTM Medical Specialist Centre. In this instance, the

English Language version was used. Participants were first briefed by an occupational therapist. They then laid down and followed the audio recording in a comfortable and dimmed room with a good speaker system. A feedback form was distributed to the participants immediately after the session to gauge the instructional clarity of the audio tool and its effectiveness. Twenty-nine healthcare workers ( $n=29$ ) comprising medical officers ( $n=11$ ), physiotherapists ( $n=12$ ), nurses ( $n=3$ ), occupational therapists ( $n=2$ ) and a clinic assistant ( $n=1$ ) participated. Table 2 reports the response to nine items listed on a short feedback form completed by the participants.

**Table 2: Response to Experiencing Bespoke Music and Narration**

<b>RESPONSE TO STATEMENT</b>	<b>Strongly Disagree (%)</b>	<b>Disagree (%)</b>	<b>Agree (%)</b>	<b>Strongly Agree (%)</b>
I could follow the instructions	0.0	0.0	51.8	48.2
The music and narration fit well	0.0	0.0	37.9	62.1
I like the narration	0.0	0.0	41.4	58.6
I like the music	0.0	0.0	62.1	37.9
I would recommend this experience to my colleagues/friends	0.0	0.0	41.4	58.6
I nearly fell asleep	0.0	10.4	37.9	51.7
I can use this kind of therapy for my own relaxation	0.0	0.0	31.1	68.9
I think it will help patients relax	0.0	0.0	32.1	67.9
The session was relaxing for me	0.0	0.0	34.4	65.6

The feedback reported in Table 2 indicated a clear majority of ‘agree’ and ‘strongly agree’ responses with 100% positive responses recorded for eight out of the nine questions. The nine items were constructed to ascertain (i) the ease in following the instructions (ii) whether the music and the narration fitted well, (iii) how much the participants liked the narration, (iv) how much they liked the music, (v) whether their experience was sufficiently positive to recommend it to friends and colleagues, (vi) if they nearly fell asleep during the session, (vii) whether they would use this kind of therapy for their own relaxation, (viii) if they think this approach will help patients relax and (ix) if they found the session relaxing for



themselves. Overall, the participants' responses indicated that the instructions were clearly understood with the music and the narration fitting well. This is important as it ensures that the instructional procedures are understood and accurately followed. Good rhythmic control and poetic connectivity between the music and narration are key elements in achieving a seamless flow of muscle tension and relaxation. The participants' recommendation of this first-hand experience to friends and colleagues represents an added validation of this approach. The fact that the healthcare workers responded that they would use this kind of therapy themselves and were so relaxed that they nearly fell asleep bear testimony to the effectiveness of this audio tool in inducing relaxation. A clinical study using this novel approach to promote mental health and well-being is envisaged.

## **CONCLUSION**

The COVID-19 pandemic has brought mental health care and rehabilitation to the forefront of health and wellness research to improve the quality of healthcare service. Premised on interdisciplinary practice-based methodology in designing and realizing a conceptual framework, this study posits a novel approach to promote relaxation that enables translational research-in-practice. Results of the study were represented by three outputs in the form of (i) progressive muscle relaxation scripts in English Language and in the Malay Language, thereby enabling greater accessibility and cultural inclusivity (ii) the crafting of especially composed music and pulse-based narration as a creative approach to promote mental relaxation, health and wellness and a (iii) confirmation of the instructional clarity and relaxing qualities of the innovation by a group of healthcare workers. Further studies to assess the efficacy of this innovative approach to promote mental health among a larger sample of users will be conducted. This study contributes to the growing need for non-pharmacological, non-invasive and creative means in addressing exponential mental health concerns brought about by the global pandemic. Dichotomies between opening up the economy and closing international borders, suppressing transmission and promoting herd immunity, prevention of amplifying events that may spike outbreaks, continued targeted response to clustered outbreaks through testing, contact tracing and isolating, and the risk of low efficacy vaccines all represent vicissitudes of the disease that has befallen on 21<sup>st</sup> century citizens. Innovative solutions beyond conventional means are urgently needed to

bridge the mental and emotional gap of disadvantaged communities affected by the COVID-19 pandemic.

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## **REFERENCES**

- Candy, L., & Edmonds, E. (2018). Practice-based research in the creative arts: Foundations and futures from the frontline. *Leonardo*, 51(1), 63-69.
- Carr, C., Odell-Miller, H., & Priebe, S. (2013). A systematic review of music therapy practice and outcomes with acute adult psychiatric inpatients. *Plos One* 8. <https://doi.org/10.1371/journal.pone.0070252>.
- Dunbar, R., Kaskatis, K., MacDonald, I., & Barra, V. (2012). Performance of music elevates pain threshold and positive affect: Implications for the evolutionary function of music. *Evolutionary Psychology*, 10(4), 688-702. PMID: 23089077.
- Feldman, G., Greeson, J., & Senville, P. (2010). Differential effects of mindful breathing, progressive muscle relaxation, and loving kindness meditation on decentering and negative reactions to repetitive thoughts. *Behaviour Research and Therapy*, 48(10), 1002-1011. doi: 10.1016/j.brat.2010.06.006.
- Grahm, B. S. (2020). Rapid COVID-19 vaccine development. *Science*, 368945-946. doi:10.1126/science.abb89 23.
- Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals of the Academy of Medicine*, 49(3), 155-160. PMID: 32200399.

- Jacobson, E. (1938). *Progressive relaxation* (2nd ed.). Chicago: University of Chicago Press.
- Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yang, B., Wang, Y., Hu, J., Lai, J., Ma, X., Chen, J., Guan, L., Wang, G., Ma, H., & Liu, Z. (2020). The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *Lancet Psychiatry*, 7(3), E14, March 01. doi: 10.1016/s2215-0366(20)30047-x.
- Kim, J., & Stegemenn, T. (2016). Music listening for children and adolescents in health care contexts: A systematic review. *The Arts in Psychotherapy*, 51, 72-85. <https://doi.org/10.1016/j.aip.2016.08.007>
- Miranda, D., Gaudrea, P., Debrosse, R., Morizot, J., & Kirmayer, L. (2012). Music listening and mental health: Variations on internalizing psychopathology. In R. MacDonald, G. Kreutz, and L. Mitchell (Eds.), *Music, Health and Wellbeing* (pp. 513-530). Oxford, UK: Oxford University Press.
- Rajkumar, R. (2020). Covid-19 and mental health: A review of existing literature. *Asian Journal of Psychiatry*, 52, 102066. <https://doi.org/10.1016/j.ajp.2020.102066>.
- Raven Pro (2020). Sound Analysis Software, Cornell Lab for Ornithology, Cornell University, <https://ravensoundsoftware.com/software/raven-pro/>
- Ross, V. (2017). Crafting electroacoustic music for sensory integration therapy. *International Journal of Health, Wellness and Society*, 7(1), 23-29.
- Ross, V. (2018). Translational research in music. *International Journal of Interdisciplinary Social Science Studies*, 4(1), 101-108.
- Vancampfort, D., Correll, U. C., Scheewe, T. W., Probst, M., Herdt, A. D., Knapen, J., & Hert, M. D. (2013). Progressive muscle relaxation in persons with schizophrenia: A systematic review of randomized controlled trials. *Clinical Rehabilitation*, 27(4), 291-298. doi: 10.1177/0269215512455531.

World Health Organization (2020). Substantial-investment needed to avert mental health crisis. <https://www.who.int/news-room/detail/14-05-2020-substantial-investment-needed-to-avert-mental-health-crisis>, 14 May 2020.

World Health Organization (2020). World Mental Health Day: An opportunity to kick-start a massive scale-up in investment in mental health. <https://www.who.int/news-room/detail/27-08-2020-world-mental-health-day-an-opportunity-to-kick-start-a-massive-scale-up-in-investment-in-mental-health>, 27 Aug 2020.

Yinger, O., & Gooding, L. (2015). A systematic review of music-based interventions for procedural support. *Journal of Music Therapy*, 52(1), 1-77. <https://doi.org/10.1093/jmt/thv004>.