

# Processing Music Rhythm Patterns as Body Accompaniment in an Effort to Increase Body Immunity Against Covid-19

Moh. Sarjoko<sup>1\*</sup>, Dhani Kristiandri<sup>1</sup>, Harpang Yudha Karyawanto<sup>1</sup>,

Waruh Handayaningrum<sup>2</sup>, Heri Murbiyantoro<sup>1</sup>

<sup>1</sup>Music Department, Universitas Negeri Surabaya, Surabaya, Indonesia

<sup>2</sup>Sendratasik Education Department, Universitas Negeri Surabaya, Surabaya, Indonesia

\*Corresponding author. Email: sarjoko@unesa.ac.id

## ABSTRACT

Physical and spiritual health is one of the most important supporting factors in carrying out all daily activities to maintain body immunity during the Covid-19 pandemic. There are various body movements that are adjusted to the most important supporting factor is music. Music is a sound that can provide a sense of pleasure and enthusiasm, with a wide variety of musical variations in a person's movement patterns will not feel saturated with monotonous rhythm patterns. The purpose of this study is to get results and find out how music art study program students are motivated in responding to musical rhythm patterns as an effort to increase immunity to fight Covid-19. This research uses the Research and Development method. The results of this research are products in the form of accompaniment music for light exercise. Product trials were conducted at the Department of Music, Surabaya State University, with purposive sampling. Data analysis of the product validity results is arranged in a Likert Scale questionnaire. The development of this musical composition showed significant results with a percentage of up to 85% of students feeling the effects of movement with varied rhythmic exercises.

**Keywords:** *Impact of music, processing music rhythm patterns, accompaniment music*

## 1. INTRODUCTION

Everyone in the world must have heard and used the term health in their daily conversation. Even so, of the many people who have used this term, surely not all of them know what the word health actually means. Some people often interpret health with the word healthy. But if interpreted clearly, these two terms have different meanings.

The term health usually refers to a healthy body condition. The term health is the development of the term or healthy word which means it is free from disease. Health is a state of well-being of the body, soul, and social that enables everyone to live productively socially and economically. Health efforts are any activities to maintain and improve health carried out by the

government and or the community. Lately the community was shocked by the spread of Coronavirus Covid-19 which has spread in many countries and caused fatalities. Let us identify what is Covid-19 coronavirus, its causes and prevention efforts so that it can take action to anticipate the spread of this disease.

Coronavirus (CoV) is a large family of viruses that cause diseases ranging from mild to severe symptoms. There are at least two types of coronavirus that are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The coronavirus novel (Covid 19) is a new type of virus that has never been identified before in humans. Corona virus is zoonosis (transmitted between animals and humans). Research says that SARS-CoV is transmitted from civet cats to humans and MERS-CoV from camels to humans. Some coronaviruses are known to circulate

in animals but have not been proven to affect humans. Clinical manifestations usually appear within 2 days to 14 days after exposure. Common signs and symptoms of coronavirus infection include acute respiratory distress symptoms such as fever, coughing and shortness of breath. In severe cases can cause pneumonia, acute respiratory syndrome, kidney failure, and even death.

Maintaining a healthy lifestyle is inseparable from the aspect of fitness, when the condition of the body is always in good shape, then endurance or immunity will always be maintained, so that expectations are not exposed to covid-19. Body fitness can be realized by eating a nutritious and regular diet, and by doing bodybuilding exercises. Body movements to achieve increased immunity require regular patterns through various stretches of the body's organs, which are generally guided by a certain amount. In the count pattern there is an unconscious aspect of musicality, if associated with music is the pattern of rhythm in a musical rhythm.

Music has a great role and importance in human life since it has the ability to trigger or convey feelings [1]. Another statement said that many qualified music therapists use music intervention to enhance an individual's non-musical skills through music activities such as listening to music, singing, playing instruments, composing, analysing, and moving with music [2]. It shows that musical components are useful to keep maintain our health and our body fitness. The pattern of rhythm in musical science is formed in a bar, which contains several types including: 2/4, 3/4, 4/4, 6/8 and so on. Barama is the number of beats and musical note values in a piece of music. These rhythmic patterns can affect body movement patterns, so that body movements will become organized.

The explanation above is the initial concept of researchers to explore various rhythmic patterns that exist in musical science, which will be processed by researchers into a form of musical composition, arrangement, and high and low musical tonality, which is packed with compact disc products, with the hope that rhythm pattern processing products in music packaging can be used as stimulation of body movements, as well as creating an optimal power of immunity for the prevention of covid-19 transmission.

In the concept of making music compositions, researchers use a variety of music styles, both traditional and modern music, so there are several variations of music that make music presentations from several regions and is its trademark, it is one way that the music to be presented later can be communicative and familiar to users or connoisseurs who are the academic community of Surabaya State University.

## 2. METHOD

This type of research is development research. Development research is a research method that intentionally, systematically, aims to find, formulate, improve, develop, produce, test the effectiveness of products, models, methods / strategies / ways, services, certain procedures that are superior, new, effective, efficient, productive, and meaningful (Putra, 2012: 67). The intended development is in the form of processing Music Rhythm Patterns as Accompaniment of Body Motion in Efforts to Enhance Immunity Against Covid-19.

Any music work is the close combination of rhythm, melody, form, style and various musical elements [3]. This accompaniment audio product contains rhythmic music in a variety of patterns that can be applied as accompaniment to body movements, which are devoted to efforts to increase the body's resistance to the Covid-19 virus that is currently endemic.

## 3. RESULT AND DISCUSSION

This research is a form of research that combines the art of music, especially regarding rhythm and tempo, with physical health, which is implemented into a rhythmic *gymnastic* audio packaging. In the long term, the aims and results of this research are expected to be an innovative, practical and effective sports recreation media.

**Table 1 Scoring assessment test for audio effectiveness of processing music rhythm patterns as stage 1 body accompaniment**

No.	The element being assessed	Alternative Answers				
		5	4	3	2	1
		VL	L	F	G	VG
1.	The implementation of the tangles of each stage in the exercise activities of the body.		√			
2.	The process of body movement during the initial stages (heating movements).			√		
3.	The process of body movement during the core stage.		√			
4.	The process of body movement during the closing stage (cooling session).			√		
5.	The independence of the community in using audio products Processing Rhythm Music Patterns as Accompanying Body Motion in Efforts to Enhance Immunity Against Covid-19.			√		

First Trial Score Recapitulation (Highest Score Amount: 5 x 4 items = 20):

No item gets a score of 5 : 5 x 0 = 0  
 There are 2 items that get a Score of 4 : 4 x 2 = 8  
 There are 2 items that get a Score of 3 : 3 x 3 = 9  
 No item gets a score of 2 : 2 x 0 = 0  
 No items got a Score of 1 : 1 x 0 = 0  
 Total : 17.

Percentage Results =  $\frac{\text{Trial Score Results}}{\text{Score Amount}} \times 100\%$  Highest  
 =  $\frac{14}{25} \times 100\%$   
 = 68 %

(Valid, Quality, Can be used with minor improvements).

**Table 2 Audio effectiveness assessment score processing processing rhythmic patterns of music as a stage 1 body movement**

No.	The element being assessed	Alternative Answers				
		5	4	3	2	1
		VL	L	F	G	VG
1.	The implementation of the tangles of each stage in the exercise activities of the body.		√			
2.	The process of body movement during the initial stages (heating movements).		√			
3.	The process of body movement during the core stage.	√				
4.	The process of body movement during the closing stage (cooling session).	√				
5.	The independence of the community in using audio products Processing Rhythm Music Patterns as Accompanying Body Motion in Efforts to Enhance Immunity Against Covid-19.		√			

Summary of Second Trial Score (Highest Score Amount: 5 x 4 items = 20):

There are 2 items that get a Score of 5 : 5 x 2 = 10  
 There are 2 items that get a Score of 4 : 4 x 3 = 12  
 No item gets a score of 3 : 3 x 0 = 0

No item gets a score of 2 : 2 x 0 = 0  
 No items got a score of 1 : 1 x 0 = 0  
 Total : 22

Percentage Results =  $\frac{\text{Trial Score Results}}{\text{Score Amount}} \times 100\%$

Highest Score Amount  
 =  $\frac{22}{25} \times 100\%$   
 = 88 %

(Very Good, Very Valid, can be used without repair).

Regarding the percentage classification in the audio testing process of Rhythm Music Pattern Processing, it can be described in the following table:

**Table 3 Classification of score presentage test results effectiveness of audio rhythm pattern music processing**

No	Criteria for Achieving Value	Validity Level
1.	76 % - 100 %	Very valid, very high quality, can be used without improvement.
2.	51 % - 75 %	Valid, quality, can be used with small improvements.
3.	26 % - 50 %	Invalid, not qualified, cannot be used.
4.	1 % - 25 %	Very invalid, very not quality, cannot be used.

The effectiveness of audio use Music Rhythm Pattern Processing can be measured from each activity carried out by students while using this product. The effectiveness can be seen starting from: (1) the process of gestures during the initial stages (heating movements), (2) the process of gestures during core movements (high impact), (3) the process of gestures during the closing stages (cooling down movements), up to (4) A measure of independence in the use of audio Rhythm Pattern Music Processing. Based on the data 2 (two) times of the implementation phase, a significant score increase was seen, ranging from a percentage of 68% to 88%. This shows that this Audio Rhythm Pattern Processing audio product is applicable or easily used independently by the community.

**3.1. Processing Rhythm Patterns, Music Rhythm, and Body Motion Tonality accompaniment**

In music, rhythm is one of the important factors, and keeping the steady tempo is the basis for playing music. Rhythm is the component of music that punctuates time, carrying us from one beat to the next and subdivides into simple ration just like pitch [4]. In the early stages of this accompaniment music composition using a medium tempo speed or in a musical term called Allegro moderato, within that tempo there are 140 beats in 1 minute, while the rhythm pattern uses the Reggae rhythm pattern,

melodic texture is played with nuances of tones on gamelan instruments with ethnic music tonality Java, then accompanied by piano instruments as a chord progression amplifier. The description is a part of the intro that starts from the first bar to the 8 bar, and is already in the stage of warming up in body movements. The intro music notation can be seen below:



**Figure 1** Bar 1-4 (Intro)



**Figure 2** Bar 5-8 (Intro)

The accompaniment of the musical form at the intro stage uses flat and repeated tones, adjusting to the motion patterns of the body while it is still warming up, so that a flat rhythm pattern is not needed to jump up the tone register, so that it can be followed by a pattern of motion that has not been draining.

The next intro stage is in the 18 to 34 years with the rhythmic pattern still in reggae music, however, it has undergone the development of rhythmic pattern processing and melodic texture, with the addition of drum set instruments to strengthen the tempo and variations in rhythm patterns. The form of music at the intro stage is also the development of the main melody that is played with the Flute instrument, then followed by the violin instrument and the organ, with higher note registers and experiencing an ascending sequence. The pattern is to deliver a more aggressive motion response and increase in motion energy.



**Figure 3** Bar 18-21



**Figure 4** Bar 22-26



**Figure 5** Bar 26-30



**Figure 6** Bar 30-34

After the initial stage rhythm pattern which is a reggae rhythm with various rhythmic patterns and melodic variations, is also supported by several instruments in the application of compositional orchestration, then in the next stage it changes the rhythm pattern, tempo speed, musical instruments played, also the rhythm changes to variations in patterns the rhythm of the tabla instruments, and the zither that dominates, the change in the pattern is found in the 50 to the 105 measure. This stage is the core of body motion after warming up with the reggae rhythmic pattern as the accompaniment, whereas at the core stage of the gesture the musical accompaniment is made with a composition rhythmic dangdut with variations in rhythmic patterns on the tabla instruments, while accompaniment instruments are on the zither, and the main melody is on the flute instrument. The composition notation can be seen on the fullscore display as follows:



**Figure 7** Bar 50-54

In the time frame there is no underlying melodic texture, however there is already a chord progression and a *tabla* rhythm pattern.



**Figure 8** Bar 55-59

In the time frame there is still no underlying melodic texture, however the *tabla* game still continues, as well as the chord progression accompaniment



**Figure 9** Bar 66-73

In the bars of 66 to 73 is the start of the main melody and supporting rhythm patterns that experience repetition in the next bar until the 106 rhythm. The rhythmic patterns of the percussion instruments are played by tabla and tom-tom instruments, while the type of rhythm pattern uses 1/8 and 1 tones / 16 with the type of rhythm duo and quartet.



**Figure 10** Bar 106-110 (Chapter C)



**Figure 11** Bar 111-113 (Chapter C)

The rhythm pattern in letter C or time 106 to time 113 is a transition of the rhythm pattern movement from dangdut rhythm patterns with tabla supporting instruments to reog ethnic rhythmic music patterns that have changed the support of musical instruments, namely drums, gamelan, and percussion.



**Figure 12** Bar 122-126 (Chapter C)

The rhythm pattern in the 122 to 126 rhythm is the rhythm pattern is the reog ethnic music rhythm, with supporting instruments of the flute, violin, and percussion music, the rhythmic pattern of the birama is more dominated by short tones which have values of 1/4 and 1/8 and supported pentatonic notes nuanced to the music accompanying reog tradition. The rhythm of the music repeats up to the time of 139

with the allegro tempo and is still the accompaniment of core body movement music.



**Figure 13** Bar 140-143 (Chapter D)

The rhythmic patterns in the 140 to 143 rhythm are rhythmic patterns which are rhythmic, supported by triangul percussion instruments, violins and gamelan, these rhythmic patterns are repeated up to 163 rhythms and are still in the stage of core body movements.



**Figure 14** Bar 164-167 (Chapter D)

The rhythm pattern in the range 164 to 167 is a transition pattern towards the rhythm pattern of the final stage or cooling of body movements, the rhythmic pattern is only a progression of accompaniment chords and is supported by flute, violin, piano and percussion instruments. The tempo used is changing slowly.



**Figure 15** Bar 172-176 (Chapter D)

The rhythm pattern in the range 172 to 176 is a rhythm pattern that adjusts to the stages of the body's cooling movement, so that the tempo used is slower than the tempo of the core body movements, while the tones in that part use long tones, and the rhythm pattern is dominated by notes that are 1/4, 1/2, and 1 or full. The rhythm and rhythm pattern of the music used in the cooling stage is repeated until the 204

### 3.2. Music Section Accompaniment of Body Motion and Music Characteristics

The musical creation is random and the meaning it expresses is profound and diversified [5]; also with this music section accompaniment. The process of rhythm music accompaniment to body movement has 5 parts of music form, in the early stages of the music form uses the concept of music presentation with reggae rhythm patterns with a medium tempo, then the tonality is nuanced with pentatonic ethnicity, and is supported by several musical instruments, violin, flute, piano, and percussion. Forms of music in the early stages using pentatonic tones, with communicative expectations, are familiar with these tones, because they are characteristic of Javanese ethnic music.

### 4. CONCLUSION

The rhythm pattern in bars 1 to 204 is a rhythm pattern that adjusts to the stage of body movement, so the tempo used varies from the tempo of the initial body movement, core, and cooling, while the tones in that section use the tones and rhythm patterns of music ethnicity from several regions, and supported by musical instruments that can show regional characteristics, the rhythm is dominated by notes that are  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1 or full.

The rhythm of the music used varies and characterizes ethnic music from several regions namely, Javanese pentatonic, Indian dangdut, Reog music, Banyuwangi music, and degung music. The composition of the music was made with the intention that the users besides responding to body movements and can increase body immunity, can also recognize the type and form of music that is presented familiar, besides responding to the music with body movements, as well as being able to draw the imagination into a particular area. This can be a form of body and brain refreshment.

### ACKNOWLEDGMENT

This research is fully supported by Universitas Negeri Surabaya Research Grant.

### REFERENCES

[1] Er, Mehmet Bilal, and Ibrahim Berkan Aydilek. "Music emotion recognition by using chroma spectrogram and deep visual features." *International Journal of*

*Computational Intelligence Systems* 12.2 (2019): 1622-1634.

[2] Chanyanit, Charoenphol, Natee Chiengchana, and Nion Tayrattanachai. "The Effects of Parent-Child Interactive Music Therapy on Sentence Verbalisation in a Child with Autism Spectrum Disorder: A Case Study." *Malaysian Journal of Music* 8 (2019): 86-95.

[3] Lin, Dongbo. "Research on Interpenetration Between Solfeggio and Ear Training and Music Aesthetic Psychology Based on Aesthetics." *2015 International Conference on Education Technology and Economic Management*. Atlantis Press, 2015.

[4] Tanaka, Hideyuki, and Keita Ueda. "Comparison of Off-line Visual and Verbal Feedback Instructions for Keeping Tempo in Music." *Journal of Robotics, Networking and Artificial Life* 5.3 (2018): 208-211.

[5] Liu, Lu. "Analysis on Interpretation of Humanistic Implication by Schubert's Piano Music Based on Piano Impromptus Playing." *2015 International Conference on Education Technology and Economic Management*. Atlantis Press, 2015.

[6] Banoe, Pono. 2003. *Pengantar Pengetahuan Harmoni*. Yogyakarta: Kanisius

[7] Creswell, John W. 2014. *Research Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed*. Yogyakarta: Pustaka Pelajar

[8] Majid, Abdul. 2008. *Perencanaan Pembelajaran: Mengembangkan Standar Kompetensi Guru*. Bandung: PT Remaja Rosdakarya

[9] Prier, Karl-Edmund. 2009. *Ilmu Harmoni-Edisi Baru*. Yogyakarta: Pusat Musik Liturgi

[10] Prier, Karl-Edmund. 2011. *Kamus Musik*. Yogyakarta: Pusat Musik Liturgi

[11] Putra, Nusa. 2012. *Research and Development: Penelitian dan Pengembangan*. Jakarta: PT. Raja Grafindo Persada

[12] Sukohardi, Al. 2011. *Edisi Revisi - Teori Musik Umum*. Yogyakarta: Pusat Musik Liturgi.

[13] Sugiyono. 2011. *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Penerbit Alfabeta.