

## Research article

# Music Therapy to Help Ease Mental Health Disorders Associated with COVID-19

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**Abstract.**

In-person school activities have suddenly become online-only. The trigger, of course, was the pandemic and government policies. Changes of this kind have triggered anxiety in adolescents in Indonesia, namely anxiety about the ability to adapt to the transition of learning from offline to online. This research focused on finding solutions to this anxiety through a musical approach. Data were collected through library research on COVID-19 and from school students in Indonesia for the period March 2020 to March 2021. The results showed that music therapy can help teenagers overcome anxiety. Music helps release endorphins and is useful for reducing excessive anxiety.

**Keywords:** school online, music therapy, mental disorder, COVID-19, anxiety

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## 1. Introduction

Music has ten functions, namely the function of emotional expression, the function of aesthetic appreciation, the function of integrating society, the function of communication, the function of symbolism, the function of ratifying social institutions, the function of teaching social norms, the function of cultural continuity, the function of entertainment, and the function of physical reaction [1]. In music as entertainment, it appears that music has a role in relaxing the mind. In the function of music as a physical reaction, music has a role in stimulating the body. Stimulation can be in the form of empowerment, but it can also be relaxation. If it is true that music can relax the body and mind, it means that music has benefits as a treatment for excessive anxiety due to the pressure of the pandemic

The pandemic has impacted all aspects of Indonesia, one of which is education [2]. It requires the government to swiftly tackle the COVID-19 pandemic [2]. One of the government policies is the limitation of activities outside the home [3]. Initially, restrictions on activities outside the home were only valid for 14 days in Indonesia.

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However, as the number of COVID-19 cases increases, the government has extended restrictions on activities outside the home for an indefinite period [3]. This restriction is what makes the world of education change its education system from offline to online.

Online learning has several advantages and disadvantages. There are four advantages of online learning. First, students and teachers carry out learning activities in various place [4]. Second, online media also makes students obtain more information through the internet [5]. Third, the use of technology helps in carrying out learning during restrictions on activities outside the home. Fourth, the millennial generation is already close to technology, so they adapt more quickly to online learning [6].

On the other hand, online learning also has its drawbacks. There are four disadvantages of online learning. First, students who live in remote areas do not have internet coverage [7]. Second, the cost of using the internet quota is an obstacle for low economic levels [4]. Third, the success of learning depends on the readiness of teachers and students in online learning assignments [7]. Fourth, not all teachers or teachers can operate online learning optimally [8]. Fifth, when teachers have difficulty reaching their students, they tend to multiply assignments to have the same development as offline [4].

Teachers who feel that the quality and achievements of online learning cannot match those of offline ones will try to reduce their lag. All the limitations of material delivery and practical assistance, usually completed face-to-face offline, suddenly stutter because of distance limitations and unfamiliarity. To bridge this gap, teachers increase the volume of students' independent assignments at home, both qualitative and quantitative. If five out of ten teachers increase the qualitative volume, it means that the student's workload suddenly increases to 150% more difficult than in offline activities. Conversely, suppose five out of ten teachers only increase the number of assignments without increasing the level of difficulty. In that case, students will get shorter assignment collection intervals from learning outside the pandemic. The qualitative and quantitative increase in the workload triggers excessive anxiety in students forced to undergo online schooling in the pandemic. Teenagers' excessive anxiety needs to be addressed quickly to reduce the physical and psychological impact. Music provides adolescents with opportunities to express themselves and resolve emotional problems ranging from anger, grief, longing, and psychological disintegration to a personal level. In line with that, music therapy is also an easy, effective, inexpensive, and safe therapy to reduce anxiety in adolescents [9].

If it is true that music can reduce anxiety, then music can be a therapeutic tool to reduce students' excessive anxiety about learning. Theoretically, students' excessive

anxiety reduction therapy can be approached with the function of the entertainment function and the function of the physical reaction. Music therapy is simple, straightforward, and does not cause side effects. There have been many studies on the benefits of music therapy. Physiological and clinical research results show that music therapy has reduced pain, anxiety, blood pressure, heart rate, respiratory rate, and increased oxygen saturation. However, it is necessary to write a great discussion that can recommend the type of data on music characters suitable for reducing the anxiety of middle-aged students in dealing with their anxiety about learning with tremendous pressure.

This study aims to determine how music works in reducing anxiety about online learning. This research is focused on music therapy for high school students who experience excessive anxiety due to online learning. It is hoped that through this research, recommendations for music specifications that are suitable for reducing excessive anxiety in high school students are obtained.

## 2. Method

Researchers conducted library research by collecting research on COVID-19. Implementation related to covid-19 starts from March 2020 to March 2021. Researchers took a sample of high school students who did online school. Researchers take a sample of high school students who do online school. Subjects took from three schools, and each school sent twenty-four students to identify anxiety about this online school.

The implementation of music therapy in adolescents is carried out for 15-30 minutes every day. The sample in this study were adolescents aged 15-18 years. The researcher divided the sample into two groups. Thirty-six adolescents were in the control group, and thirty-six other adolescents became the intervention group. The intervention group was given treatment in music therapy, while the control group was not given therapy. The types of music therapy implemented are classical, pop, and dangdut genres. For six days, the researchers forbade the teenagers in the sample group to listen to sad songs. Therefore, this research can be categorized as a quasi-experimental pre-test-post test with a control group.

## 3. Result and Discussion

Music was chosen as an alternative to relieve the anxiety experienced by teenagers when doing online learning. Music can make listeners more relaxed and relaxed. Music therapy is a form and style combined with sound stimulation consisting of melody,

rhythm, harmony, and timbre. Not all music can be an alternative to music therapy. Music with a fast tempo and irregular tones cannot be used as an alternative to therapeutic music [10]. Music that can be categorized as music therapy is music with 1) regular rhythm, 2) traditional melody, and 3) has a tempo of 80 bpm. Researchers found that symmetrical music can relax the brain.

Music exposure is also associated with changes in the listener's emotions. Music is a universal stimulus that can induce the listener's mood [10]. From the point of view of cognitive neuroscience, emotion has components. Emotional responses can occur without having to be preceded by the process of experiencing emotions consciously. That is, the response can appear without the need to be preceded by a feeling. Listening to music is one of the events where an emotional response can appear without emotional feelings to be preceded. The brain areas involved in the formation of the components of the emotional response are the hypothalamus and brainstem nuclei. It also stimulates hormones in the brain to be distributed throughout the body.

Music can provide positive emotions for the listeners. In addition, music also stimulates brain waves so that the brain balances the production of serotonin, norepinephrine, and dopamine naturally with the principle of stimulating the right ear and left ear with different frequencies. Thus, the brain will process the frequency it receives.

The hormones serotonin, norepinephrine, and dopamine have their respective functions. Serotonin functions to regulate mood, control impulses, build self-confidence and fight the toxic effects of high levels of stress hormones. Norepinephrine functions to improve mood, intrinsic motivation, and self-confidence and improve perception. While dopamine has a function to motivate oneself, be alert, and focus, regulate hormone secretion from the pituitary gland [11].

Beta endorphins also appear and increase when listening to music, so listening to music can increase happiness and feelings of relaxation, causing the elimination of anxiety neurotransmitters in the somatic sensory perception and interpretation centre in the brain so that the effect that can appear is reduced anxiety. In listening to music, in the acumen hole, this activity triggers the secretion of dopamine. Dopamine secretion motivates the secretion of serotonin and the secretion of analgesic endorphins. So that by listening to music regularly will experience relaxation in reducing the stress and sadness experienced [12].

On the other hand, researchers found that anxiety is common in most female sex—both from the intervention and control groups [8] Women are more likely to experience anxiety than men [10]. The reason is that the limbic system or brain structures associated with emotional regulation in women are more developed than men. It makes it easier

for women to feel anxiety than men. Music therapy intervention is an easy, inexpensive, and safe method to reduce anxiety [13]. Classical music is considered to relieve the anxiety experienced by most students due to online schools. Music that has a flowing tempo has a frequency below 1000 Hz and is lilting is considered capable of releasing hormones in the body [14].

## 4. Conclusion

How to reduce anxiety in adolescents can use music therapy media. Symmetrical music consisting of regular rhythms, familiar melodies, and has a tempo of  $\pm 80$  bpm can suppress anxiety in adolescents. Music thus triggers the brain to give orders to the body to release hormones. The body releases endorphins, dopamine, norephremin, and serotonin hormones that can make the body calmer and more relaxed to suppress the excessive anxiety experienced by teenagers in dealing with online classes.

## References

- [1] A. P. Merriem, *Antrophology Music*. USA: Northwestern University Press, 1964.
- [2] A. Budianto, "Pandemi Covid-19," *Sindonews*, Jun. 21, 2021. <https://www.sindonews.com/topic/5065/pandemi-covid-19>
- [3] N. R. Yunus and A. Rezki, "Kebijakan Pemberlakuan Lock Down Sebagai Antisipasi Penyebaran Corona Virus Covid-19," *SALAM; Jurnal Sosial & Budaya Syar-i*, vol. 7, no. 3, pp. 227–238, 2020, doi: 10.15408/sjsbs.v7i3.15083.
- [4] D. H. Oktawirawan, "Faktor Pemicu Kecemasan Siswa dalam Melakukan Pembelajaran Daring di Masa Pandemi Covid-19," *Jurnal Ilmiah Universitas Batanghari Jambi*, vol. 20, no. 2, pp. 541–544, 2020, doi: dx.doi.org/10.33087/jiubj.v20i2.932.
- [5] R. A. Zandra, "Android-based Music Practice Material Completion Application," *Resital: Jurnal Seni Pertunjukan*, vol. 19, no. 3, pp. 157–165, 2018, doi: 10.24821/resital.v19i3.3430.
- [6] R. A. Zandra, "Daily Score Cards Android Smartphones," in *KnE Social Sciences*, 2020, pp. 413–426. [Online]. Available: [knepublishing.com/index.php/KnE-Social/article/view/7615](http://knepublishing.com/index.php/KnE-Social/article/view/7615)
- [7] Firman and S. Rahayu, "Pembelajaran Online di Tengah Pandemi Covid-19," *Indonesian Journal of Educational Science (IJES)*, vol. 2, no. 2, pp. 81–89, Apr. 2020, doi: 10.31605/ijes.v2i2.659.

- [8] H. S. S. Rahayu, E. W. S. D. Pratamawati, and R. A. Zandra, "Video Pembelajaran untuk Generasi New Milenial," *Jurnal Ilmu Pendidikan*, vol. 4, no. 1, pp. 1–5, 2020, Accessed: Jun. 30, 2022. [Online]. Available: <https://ojs.unm.ac.id/pembelajar/article/view/11118>
- [9] S. Sulistyorini, S. N. Hasina, I. Millah, and Faishol, "Terapi Musik dalam Menurunkan Kecemasan Remaja di Masa Pandemi Covid-19," *Jurnal Ilmu Keperawatan Jiwa*, vol. 4, no. 2, pp. 289–296, 2020.
- [10] M. Jasemi, S. Aazami, and R. E. Zabihi, "The Effects of Music Therapy on Anxiety and Depression of Cancer Patients," *Indian Journal of Palliativ Care*, vol. 22, no. 4, pp. 455–458, 2016, Accessed: Jun. 30, 2022. [Online]. Available: <https://pubmed.ncbi.nlm.nih.gov/27803568/>
- [11] S. Maryati and Suyami, "Dampak Terapi Musik Keroncong Terhadap Tingkat Kecemasan Lansia di Desa Pasung Wedi Klaten," *Jurnal Motorik*, vol. 10, no. 21, pp. 44–54, 2015.
- [12] M. Saifudin and P. Wijaya, "Pengaruh Terapi Musik Klasik Terhadap Tingkat Kecemasan Remaja Putra (13-15 tahun)," *Jurnal Ners Community*, vol. 7, no. 1, pp. 21–32, 2016.
- [13] Dewi and Didik, *Pusat Terapi Gelombang Otak*. CV Karya Abadi, 2016.
- [14] E. Burhaein, "Optimalisasi Pendidikan Karakter Berbasis Permainan Tradisional Pada Pendidikan Jasmani Anak Tuna Laras Melalui Model Pembelajaran Quantum Learning," Universitas Negeri Yogyakarta, 2016.