**Original Article**

# Classic Mozart And Murrotal Alquran Therapy Music For Increasing Body Weight In LBW Infants

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ABSTRACT

***Background:*** Low Birth Weight (LBW) continues to be a significant global health problem. If there is LBW, then there must be an effort to increase the baby's weight. One of them is by giving Mozart classical music therapy. Besides that, you can also use the Qur'an's total therapy. The voice of Al-Qur'an (Murottal) has benefits that can affect health. Objective To find out the differences between Mozart's classical music therapy and Murrotal Qur'an therapy to increase body weight in LBW infants aged 0-28 days.
***Methods:*** The design used in the study was quasi-experimental. The population is all infants aged 0-28 days. The sample size is 30 respondents using the Purposive sampling technique. Independent variables of the study are classical Mozart music therapy and Murrotal Qur'an therapy. The dependent variable is the increase in body weight in LBW infants aged 0-28 days. Data was collected using a questionnaire, and then the data were analyzed using the Wilcoxon test with a significance level of $\alpha \leq 0.05$.
***Results:*** The results showed that respondents had a weighted average of before Mozart's Music Therapy of 2242.0 grams, and after Mozart's Music Therapy of 2431.3 grams, weight Before Koran Murotal Therapy was 2049.3 grams, and after Koran Murotal Therapy of 2496, 0 grams. The results showed that p = 0.023 where H1 was accepted and H0 was rejected, which means that there were differences in Mozart's classical music therapy and Murrotal Alquran therapy for weight gain in LBW infants aged 0-28 days.
***Conclusion:*** There are differences in Mozart's classical music therapy and Murrotal Alquran therapy for increasing body weight in LBW infants aged 0-28 days.

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## Introduction

The weight reflects the current nutritional state and can be a sensitive indicator of malnutrition (Surya Direja et al., 2021). Therefore weight is also used to classify the condition of newborns, including normal or LBW. Low birth weight babies (LBW) are newborn babies weighing less than 2,500 grams regardless of pregnancy. LBW is still a globally significant public health problem both in the world and in Indonesia due to its short and long-term effects on health (Ilmiati, 2021; Nur Hamida, 2019)

In 2017 as many as 15% of babies worldwide (more than 20 million people) were born with LBW (WHO, 2017). Many factors can influence low birth weight. The most

common cause of LBW is premature birth (Anita Theodora Fitriani Malisa, 2019; Bekkar et al., 2020). The LBW cannot be separated from lifestyle (smoking, alcohol, drug abuse), nutrition, mother's physical activity, food intake during pregnancy, maternal age, and diseases that may be suffered by the mother (hypertension, diabetes, malaria, HIV, or sexually transmitted diseases). Various studies also reveal that mothers in socio-economic conditions are very deficient, more often have babies with low birth weight. In these circumstances, LBW is caused by mothers who are malnourished for a long time (Chersich et al., 2020).

The impact of LBW is not only the main cause of prenatal death and causes of illness. Recent studies have found that LBW also increases the risk of non-communicable diseases such as diabetes and cardiovascular disease later in life. LBW can cause metabolic disorders, immune disorders, respiratory disorders, circulatory disorders, and fluid and electrolyte disorders (Bekkar et al., 2020). Considering the above problems, a solution is needed to prevent LBW. Global attention to this problem has been quite good, including the World Health Assembly 2012, ratifying the Comprehensive Implementation Plan on Maternal, Infant, and Young Child Nutrition by targeting a 30% reduction in LBW in 2025. Another effort is for the mother to limit the number of children because high parity is also a risk factor for LBW. Regulating pregnancy at reproductive age is not at risk. A healthy and safe reproductive period for pregnancy and childbirth is the age of 20-35 years (Ji et al., 2015; Mar'atuzzakiyah et al., 2018). If LBW has occurred then there must be an effort to increase baby's weight, one of them is by giving Mozart classical music therapy (Khairy et al., 2007). the LBW baby classical music Mozart can increase the sucking reflex so that the baby's nutrition can be fulfilled and can increase the baby's weight. It also can use the Murrotal Koran therapy (Farid & Yona, 2020; Hatmanti et al., 2022; Sari & Pujiastuti, 2021). The sound of the Al-Qur'an (Murottal) has benefits that can affect health, because it contains elements of meditation, autosuggestion and relaxation

## Methods

The design used in the study was quasi-experimental. The population is all infants aged 0-28 days. The sample size is 30 respondents using Purposive sampling technique. Independent variables of the study are classical Mozart music therapy and Murrotal Qur'an therapy. This research has Ethical Clearence. The dependent variable is the increase in body weight in LBW infants aged 0-28 days. Data was collected using a questionnaire, and then the data were analyzed using the Wilcoxon test.

## Results

Table 1. Frequency Distribution of Respondents based on infant weight

| No | Weight | Weight Average | tandard Deviation |
|---|---|---|---|
| 1 | weight Before Mozart's Classical Music Therapy | 2242,0 | 193,1 |
| 2 | weight After Mozart Classical Music Therapy | 2431,3 | 194,8 |
| 3 | weight Before Murrotal Alquran Therapy | 2049,3 | 227,6 |
| 4 | weight After Murrotal Alquran Therapy | 2496,0 | 571,3 |

The results showed that respondents had an average weight Before Mozart Music Therapy of 2242.0 grams, and after Mozart Music Therapy of 2431.3 grams. The results showed that respondents had an average weight of before Murotal Koran Therapy of 2049.3 grams, and after Murotal Alquran Therapy of 2496.0 grams. Statistical tests to determine the effect of mozart music therapy using Wilcoxon test with a <0.05 obtained p = 0.001 where H1 is accepted and H0 is rejected, which means that there is an effect of Mozart

classical music therapy on weight gain in LBW infants aged 0-28 days. Statistical test to determine the effect of mozart classical music therapy using Wilcoxon test with a <0.05 obtained p = 0.001 where H1 is accepted and H0 is rejected, which means that there is an effect of Murrotal Alquran therapy on weight gain in LBW infants aged 0-28 days. Statistical tests to determine differences in Mozart classical music therapy and Murrotal Alquran therapy using the mann-whitney test with a <0.05 obtained p = 0.023 where H1 is accepted and H0 is rejected, which means that there are differences in Mozart classical music therapy and Murrotal Alquran therapy for an increase weight gain in LBW infants aged 0-28 days

## Discussion

Statistical tests to determine the effect of mozart music therapy using Wilcoxon test with a <0.05 obtained p = 0.001 where H1 is accepted and H0 is rejected, which means that there is an effect of Mozart classical music therapy on weight gain in LBW infants aged 0-28 days. Statistical test to determine the effect of mozart classical music therapy using Wilcoxon test with a <0.05 obtained p = 0.001 where H1 is accepted and H0 is rejected, which means that there is an effect of Murrotal Alquran therapy on weight gain in LBW infants aged 0-28 days ]. Statistical tests to determine the differences in Mozart's classical music therapy and Murrotal Alquran therapy using the mann-whitney test with a <0.05 obtained p = 0.023 where H1 is accepted and H0 is rejected, which means that there are differences in Mozart classical music therapy and Murrotal Alquran therapy towards increasing weight gain in LBW infants aged 0-28 days . Low birth weight babies (LBW) are newborns weighing less than 2500 grams. Babies with LBW (Low Birth Weight) are babies born with birth weight <2500 grams regardless of gestational period (Khotimah, 2017). Low birth weight babies (LBW) are newborn babies weighing less than 2,500 grams regardless of pregnancy (Cantey et al., 2018; Ely & Driscoll, 2019). According to Manuaba (2010), LBW is caused by three factors, namely internal factors (maternal age, birth distance, parity, hemoglobin levels, nutritional status of pregnant women, antenatal care, and illness during pregnancy), external factors (environmental conditions, occupation of pregnant women , education of pregnant women, nutritional knowledge and socioeconomic), and health service use factors (Ante Natal Care frequency). The most common cause of LBW is premature birth (Morgan et al., 2020; Mushalpah, 2021). LBW cannot be separated from lifestyle (smoking, alcohol, drug abuse), nutrition, physical activity of the mother, food intake during pregnancy, maternal age, and diseases that may be suffered by the mother (hypertension, diabetes, malaria, HIV, or sexually transmitted diseases). Various studies also reveal that mothers in socio-economic conditions are very deficient, more often have babies with low birth weight. In these circumstances, LBW is caused by mothers who are malnourished for a long time (Hatmanti et al., 2022; Sari & Pujiastuti, 2021). Murottal Al Qur'an therapy is useful in stimulating the production of the hormone serotonin which will improve circadian rhythm so that it has the potential to improve sleep quality. Murottal Al Qur'an therapy with a slow and harmonious tempo can reduce stress hormones and activate natural endorphins (serotonin). This mechanism can increase feelings of relaxation, reduce feelings of fear, anxiety, and tension, and improve the body's chemical system so that it can reduce blood pressure, slow down breathing, heart rate, pulse, and brain wave activity (Susanti et al., 2022). Because of this, murottal Al Qur'an therapy has the potential to improve sleep quality.

Based on the research there is a difference in Mozart's classical music therapy and the Murrotal Alquran therapy for weight gain in LBW infants aged 0-28 days. Music therapy has the aim to improve or improve

growth, emotional, cognitive, and social for individuals. Music tempo has a physiological effect on the body, one of its effects is affecting the heart rate and blood pressure according to frequency, tempo, and volume. The heart tends to follow and try to match the tempo of a sound. Therefore this Mozart classical music therapy is also intended so that the heart rate is more stable and blood pressure becomes normal. In the LBW baby classic Mozart music can increase the sucking reflex so that the baby's nutrition can be fulfilled and can increase the baby's weight (Diana & Veronica, 2022; Indriani et al., 2018; Mar'atuzzakiyah et al., 2018). Music therapy has a positive impact on dealing with stress because it can activate cells in the patient's limbic and autonomic nervous system, so that the body's immune system increases and stimulates endorphin and serotonin expenditure. Serotonin is a chemical that transmits nerve impulses throughout the space between nerve cells or neurons and has a role in preventing anxiety, vomiting, and migraines. Changes in serotonin can make the atmosphere calm, relaxed so as to improve sleep quality. The sound of the Qur'an (Murottal) has benefits that can affect health, because it contains elements of meditation, autosuggestion and relaxation. The chanting of the Qur'an physically contains elements of the human voice, and the human voice is an amazing healing instrument and the most accessible tool (Hatmanti et al., 2022; Herdiana & Djamil, 2021; Romadhon, 2022). Sounds can reduce stress hormones, activate natural endorphins, increase feelings of relaxation, and divert attention from fear, anxiety and tension, improve the body's chemical system so that it can reduce blood pressure and slow down breathing, heart rate, pulse and brain wave activity.

## Conclusion

The results showed that respondents had an average weight before Mozart Music Therapy of 2242.0 grams, and after Mozart Music Therapy of 2431.3 grams. The study's results found that respondents had an average weight of before Murotal Koran Therapy of 2049.3 grams, and after the Murotal Alquran Therapy of 2496.0 grams. Statistical tests to determine differences in Mozart's classical music therapy and Murrotal Alquran therapy using the mann-whitney test with a <0.05 obtained p = 0.023 where H1 is accepted and H0 is rejected, which means that there are differences in Mozart classical music therapy and Murrotal Alquran therapy on weight gain in LBW infants aged 0-28 days

## Authors Contributions

The author carries out tasks from data collection, data analysis, making discussions to making manuscripts

## Conflicts of Interest

All research teams agree with the final results of this study, and there is no conflict of interest in this study.

## Acknowledgment

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