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The effect of murotal stimulation in pregnant women on fetal well-being

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Abstract

Stimulation during prenatal is a good sign for healthy fetal development. The more frequently stimulated will affect the well-being of the fetus. Al Qur'an stimulation is providing conscious and planned stimulation, by including the Qur'an in the learning process by reading, listening to and actualizing the values of the Qur'an in everyday life. Fetal welfare is a condition where the fetus is in a state of well-being which is measured based on the heart rate and fetal movements. The aim of this research is to determine the effect of providing Murotal Stimulation on fetal well-being in the Cipayung District Health Center Area. Method: This is quantitative research; design uses quasi experiments. The sample was pregnant women with a sampling strategy using purposive sampling with a sample size of 60 people. The location used is the Cipayung Community Health Center area. Research analysis uses paired t test and unpaired t test. The results of the study showed that there were differences before and after murotal stimulation on fetal well-being. It can be concluded that there is a significant relationship between murotal stimulation of the Qur'an on fetal well-being/fetal movement.

Keywords: Stimulation, Murotal Al Qur'an, Fetal wellbeing, pregnant.

Introduction

A well-planned pregnancy period, receiving services according to standards, fulfilling nutritional needs and inner peace as well as children being stimulated in the womb with the support of their husband, family and environment are necessary components in efforts to improve the quality of public health. In Indonesia, around 16% of children under the age of five years' experience developmental disorders, including speech delays and motor development disorders (Ministry of Health, 2016). One of the factors causing developmental disorders is a lack of parental stimulation of children.

The first years of a fetus's life in the mother's womb until it reaches the age of two years are a very important period in the most rapid growth and development of the human brain (Ministry of Health, 2016). Khasanah (2017), that the results of developmental screening in 30 provinces in Indonesia found that 45.12 % of babies had developmental disorders. Research in West Java showed that 30% of children experienced developmental disorders and 80% of them were caused by a lack of stimulation.

Lowdermilk (2013) factors that cause developmental disorders are heredity, neuroendocrine, nutrition, interpersonal relationships, socio-economics and disease as well as lack of stimulation in the womb. A mother who actively involves the baby in the womb, by communicating and providing prenatal stimulus can create a conducive uterine environment and can have a positive influence on the baby's life in the future. According to VERNY T and KELLY T (Deswani, 2018), stated that at a certain age the fetus can differentiate which situations or conditions that can comfort him and which ones make him uncomfortable. The fetus will react through movements, as well as long-lasting stress conditions will affect the fetus through the release of hormones that enter the blood circulation.

Various studies have shown that everything experienced by the mother during pregnancy will affect the intelligence of the unborn baby. The baby's brain grows very rapidly while the fetus is in the womb, and the fetus is aware of what is happening outside the womb. Research results of Indrajati, H (2017) The uterus is like a classroom, where during this period the

fetus can learn about many things, learn to achieve optimal physical and psychological development and to develop the baby's brain and nerves before birth. Fetal welfare is a condition where the fetus is in a state of well-being which is measured based on the heart rate and fetal movements. Fetal movements can be detected at 16 weeks of gestation in multiparas and 20 weeks in primiparas (Lowdermilk, 2013).

Monitoring fetal well-being is an ability that every pregnant mother must have, so that the mother can monitor the development of her baby while still in her womb. The results of Hatini's research, 2018, found that there was a significant influence before and after giving music therapy on fetal well-being. Stimulation of the Qur'an is providing conscious and planned stimulation, by including the Qur'an in the learning process by reading, listening and actualizing the values of the Qur'an in everyday life (Anwar, Evendi, 2016) Based on the description above, therefore we are interested in researching the influence of giving Murotal Stimulation to pregnant women on the welfare of the fetus in the Cipayung District Health Center Area.

Method

This research is quantitative research with a quasi-experimental research design with control group design.

This research carried out a Murotal Al Qur'an Stimulation intervention, namely by listening, reading or both. The sample was pregnant women according to the inclusion criteria, in total 60 people. Data analysis using *paired t test* and *unpaired t test*. This research has received ethical review approval from the Jakarta III Health Polytechnic Institute of the Ministry of Health.

Results and discussion

Study This aims to get an idea of the effect of Murotal Stimulation on the welfare of the fetus in the Cipayung District Health Center Area. Amount respondents Which become sample as much 30 persons for the intervention group and as many as 30 people for the control group. Next, the research results are described as following:

A. Results Study

1. Description Characteristics Respondent

The results of the analysis of the characteristics of respondents in the intervention group and control group based on the respondent's age and gestational age are as follows:

Table 5.1: Respondent characteristics based on age and prenatal age

Variable	Group	N	Mean	Median	elementary school	Min-Max
Respondent's age	Intervention	30	27,27	26.00	5,311	18-38
	Control	30	30.50	30.00	5,057	23-42
Gestational Age	Intervention	30	31.37	31.00	5,314	20-40
	Control	30	30.60	30.00	5,599	21-41

The Results on analysis show average age respondents on group intervention, that is Average age 27, 27 years, the youngest age is 18 years and the oldest is 38 years old, while in the group The average in control respondent was 30.50 years old with the youngest age 23 years old and oldest 42 years old. For gestational

age in the intervention group the average gestational age was 31.37 weeks, the youngest gestational age was 20 weeks and the oldest gestational age was 40 weeks, while in the control group the average gestational age was 30.60 weeks, the youngest gestational age was 21 weeks and the oldest gestational age was 41 weeks. Sunday

Table 5.2: Distribution Characteristics Respondent Based on Respondent's age, number of children, gestational age, education and gender of the child in the womb

Variable	Ex. Intervention		Ex. Control		Total	
	N	%	N	%	N	%
<u>Respondent's Age</u>						
<35 years	27	90	24	80	51	85
≥35 years	3	10	6	20	9	15
Number of Children (child to)						
1. Primi gravida	14	46.7	12	40	26	43
2. Primi Para	16	53.3	18	60	34	57
<u>Gestational Age</u>						
1. <26 weeks	4	13.3	7	23.3	11	18
2. ≥26 weeks	26	86.7	23	76.7	49	82
Education						
1. Elementary school	1	3.3	1	3.3	2	3
2. Junior High School	6	20.0	4	13.3	10	17
3. Senior High School	16	53.3	19	63.3	35	58
4. Academy/University	7	23.3	6	20.0	13	22
Gender of the child in the womb						
1. Man	8	40	8	26.7	16	27
2. Woman	10	26.7	8	26.7	18	30
3. Not known	12	33.3	14	46.7	26	43

Table 5.2 show that characteristics group intervention nor control, the majority of respondents' age is under 35 years, the majority's gestational age is over 26 weeks, both intervention and control, with educational background for the intervention and control groups. The majority of the control group had a high school education. The gender of the child in the womb was unknown for the majority of both the intervention and control groups.

2. Homogeneity test

This test is a requirement before carrying out a bivariate test. The test used for numerical data uses the independent t test. This test is used because it compares the means of two groups of data, namely the intervention group and the control group. The chisquare test is used for categorical data, because the data you want to compare is the difference in proportions from two groups of data. In detail, it can be seen in the following table:

Table 5.3: respondent equality based on Age, number of children, gestational age, education and gender of the child between groups

Variable		Intervention (n=70)		Control (n=70)		p value*
		N	%	N	%	
1. Respondent's age	≤35 years	27	90	24	80	0.969
	>35 years	3	10	6	20	
2. Number of children	1. Primi gravida	14	46.7	12	40	0.790
	2. Multi Para	16	53.3	18	60	
3. Gestational Age	1. < 26 weeks	4	13.3	7	23.3	0.338
	2. ≥26 weeks	26	86.7	23	76.7	
4. Education	1. Elementary school	1	3.3	1	3.3	0.418
	2. Middle school	6	20.0	4	13.3	
	3. High school	16	53.3	19	63.3	
	4. Academy/PT	7	23.3	6	20.0	
5 Gender of the child in the womb	1. Man	8	40	8	46.7	0.814
	2. Woman	10	26.7	8	26.7	
	3. Not known	12	33.3	14	26.7	

The results of the equality test analysis (homogeneity) are in the table. 5.3 above shows that there is no difference in the age of respondents, number of children, gestational age, education, and gender of the child in the womb between the intervention group and the control group before being given the Murotal Stimulation intervention.

3. Difference scores before and after Murotal Stimulation on fetal well-being in the intervention and control groups

Table 5.4: Score Analysis of Fetal Heart Rate and Fetal Movement, and after Murotal Stimulation.

Variable	Group	Mean	elementary school	95%CI	Q	P value
Fetal Heart Rate	Ex. Intervention	147.80	9,813 2,813	-0.95-0.428	-1,812	0.080
	Before	151.13				
	After	151.13				
Fetal Heart Rate	Ex. Control	147.90	10,053 9,795	-197-0.597	1,030	0.312
	Before	147.70				
	After	147.70				
Morning Fetal Movement	Ex. Intervention	7.67	4,046 5,573	-4,881-1,385	-3,666	0.001 _
	Before	10.80				
	After	10.80				
Morning Fetal Movement	Ex. Control	7.00	3,373 3,170	-1630-0497	-1,089	0.285
	Before	7.57				
	After	7.57				
Daytime Fetal Movement	Ex. Intervention	8.00	4,369 6,988	-3943-0857	-3,181	0.003 _
	Before	10.40				
	After	10.40				
Daytime Fetal Movement	Ex. Control	-2.400				
	Before					
	After					

	Ex. Control Before After Difference	7.00 7.97 -0.967	2,748 4,552	-2.145-0.212	1,677	0.104
Night Fetal Movements	Ex. Intervention Before After Difference	10.50 10.80 -0.300	4,369 6,988	-1.414-0.281	-1,369	0.689 _
	Ex. Control Before After Difference	7.97 8.57 -0.567	2,373 3,720	-1,966-034	-2,118	0.182

The analysis results show There isn't any meaningful differences fetal heart rate in the intervention group and control group before and after the Murotal Stimulation intervention (p value = 0.0 70) with the difference in the average score increase in the intervention group being greater (difference value = 3.333), while in the control group the average difference in scores was 0.200. Furthermore, the results of the analysis of fetal movement variables in the morning showed that there was a significant difference in the intervention group before and after the Murotal Stimulation intervention (p value = 0.00 1) with the difference in the average score increase in the intervention group being greater (difference value = 3.133), while in the control group the average difference in score

was 0.567. Likewise, the variable fetal movement during the day shows that there is a significant difference in the intervention group before and after the Murotal Stimulation intervention (p value = 0.0 0 2) with the difference in the average value of increased fetal movement in the intervention group being greater (difference value = 2,400) , while in the control group the average difference in score was 0.967 , while in the fetal movement variable at night there was no difference in either the intervention or control group,

4. Score difference Murotal Stimulation between groups

Table 5.5: Score analysis
Analysis of fetal heart rate and fetal movement scores after Murotal Stimulation intervention between groups.

Variable	Group	N	Mean	elementary school	95%CI	F	P value
Fetal heart rate	Intervention	30	151.13	2,813	-0.291-7158	7.104	0.070
	Control	30	147.70	9,795			
Morning Fetal Movement	Intervention	30	9.97	3,728	1,562-4,905	0.385	0.000
	Control	30	6.73	2,651			
Daytime Fetal Movement	Intervention	30	10.80	5,573	1,012-5,786	5,954	0.006
	Control	30	7.40	3,410			
Night Fetal Movements	Intervention	30	10.40	4.107	0.395-4.138	2,302	0.018
	Control	30	8.13	3,060			

The results of the analysis showed that there was no difference in fetal heart rate (p= 0.0 70) between the intervention group and the control group after the Murotal Stimulation intervention, but there was a significant difference in fetal movements in the morning between the intervention group and the control group (p= 0.0 00). Likewise, there are differences fetal movement during the day (p = 0.0 06) between the intervention group and the control group after the Murotal Stimulation intervention, likewise there were differences between groups in fetal movement at night between the intervention group and the control group.

Discussion

Characteristics of respondents were aged less than or equal to 35 years, although there were still those aged more than 35 years and less than 20 years. Age less than 20 years or more than 35 years is at risk of complications during pregnancy. However, the respondents in this study did not show any signs of complications. Most of the respondents were multiparous, the gestational age of most was more than or equal to 26 weeks. The fetus can be active from the age of 10 weeks, at this age the fetus' four extremities are clearly formed. The mother can feel fetal movement at least at 20 weeks of age when the fetus already weighs more

than 400 grams so the perception of movement is large enough to be felt. Continuous fetal movement can be felt by the mother so that the condition of the fetus can be continuously assessed and felt by the mother. Fetal movement can also be seen with ultrasound. Most of the education was high school, and the majority of fetuses were male.

There was a difference or difference in fetal heart rate before and after intervention in the intervention group and the results of the analysis showed that there was no significant relationship between murotal stimulation and fetal heart rate (p value 0.08). The results of this study are different from those of (Fatmawati, Ery 2023) showing that there is a difference in the influence of stimulation between classical and murotal music on fetal heart rate and fetal movements in pregnant women in the second and third trimesters.

There are differences in fetal movements in the morning, afternoon and night. The results of the analysis show that there is a significant relationship between murotal stimulation and fetal movements. The results of research (Pratiwi and Bella, 2022) concluded that there was an influence of the combination of relationship with dzhikr and murottal therapy of Al-Qur'an Surah Maryam on fetal well-being. Ahmad Fahrur Rozi or Gus Fahrur said that it is

indeed recommended to listen to the praise of Asmaul Husna and recite verses from the Koran to babies in the womb. Especially the chanting of verses from the Koran read by the baby's parents. "The holy verses of the Koran that a pregnant mother hears or reads are very good, they will relax her soul, so that the health of the fetus and mother will be better maintained and the fetus will be healthier and calmer mentally, its brain will also grow well," Gus Fahrur (2022).

The research results of Khansa, Manshoer and Shahib, 2021, show that listening to murrotal Al-Qur'an in a slow tempo and in a calm atmosphere can reduce anxiety levels in pregnant women. The tonal harmony of the murottal Al-Qur'an is spiritual music, has audio lengths with certain types of frequencies and wavelengths, produces vibrations that can restore balance and coordination, activate brain wave activity so that it can control the mind and soul to reduce anxiety.

Based on research results, the fetus has gone through a learning process since it was in the womb. The fetus can begin to hear clearly at the age of 6 months in the womb so that it can move according to the rhythm of its mother's voice (Kusrinah, 2013). The role of the mother is very important to achieve a healthy pregnancy because the fetus is actually under the influence and monitoring of the mother. Mothers can be trained to feel fetal movements so that a special relationship occurs between mother and fetus. The mother can be trained in silence to feel fetal movements (Anonymous, 2022).

Conclusion

Characteristics of respondents were aged less than or equal to 35 years, although there were still those aged more than 35 years and less than 20 years. Most of the respondents were multiparous, the gestational age of most was more than or equal to 26 weeks. Most of the education was high school, and the majority of fetuses were male.

There was a difference or difference in fetal heart rate before and after intervention in the intervention group and the results of the analysis showed that there was no significant relationship between murottal stimulation and fetal heart rate.

There are differences in fetal movements in the morning and afternoon. The results of the analysis show that there is a significant relationship between murottal stimulation and fetal movement

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References

1. Lowdermilk, Perry & Cashion. (2013). *Keperawatan Maternitas*. Buku: 2, edisi 8. Jakarta: Salemba Medika
2. Kementerian Kesehatan RI, (2016). *Pedoman Pelaksanaan Stimulasi, Deteksi dan Intervensi Dini Tumbuh Kembang Anak di Tingkat Pelayanan Dasar*. Kemenkes RI, Jakarta. kesga.kemkes.go.id

3. Khasanah, Fitriyani (2013). Pengetahuan Ibu Hamil tentang Stimulasi Perkembangan Janin. *Jurnal Ilmu Kesehatan*, Vol 5, No II
4. Deswani, Desmarnita, ulty, dan Mulyanti, Yuli. (2018). *Asuhan Keperawatan Pre Natal dengan pendekatan Neurosains*. Malang: Wineka Media.
5. Indrajati, Herdina. (2017). *Perkembangan dan Pendidikan Prenatal: Mendidik sejak dalam kandungan melalui stimulasi prenatal*. URL: <http://118.98.227.122/libdikbud/index.php/p=should>. Diakses 16 September 2020
6. Hatini (2018). *Pendampingan Pengkajian Kesejahteraan Janin pada Ibu Hamil Trimester III di kelurahan Kereng Bengkai*. *Prosiding e-journal No. 1(2018)*. <https://ejournal.poltekkestasikmalaya.ac.id/index.php/PM/article/view/149>
7. Anwar, Evendi (2016). *Sentuhan Al Qur'an untuk Kecerdasan Anak*. Yogyakarta: LKiS Pelangi Aksara.
8. Rere Van de Carr, Marc Lehran, (2017). *Prenatal Classroom: A Parent Guide for teaching your Baby*. Amazon: Humanic. [Amazon.com/gp/product/B07341525/ref:dbz-a-dehsch-vapi-taft-p1](https://www.amazon.com/gp/product/B07341525/ref:dbz-a-dehsch-vapi-taft-p1)
9. Anonim, (2022). *Kesejahteraan Janin dalam Kandungan dan peran penting Ibu*. <https://kehamilansehat.com/id/kesejahteraan-janin-dalam-kandungan-dan-peran-penting-ibu/>
10. Pratiwi, Bella (2022) *PENGARUH KOMBINASI RELAKSASI DENGAN DZIKIR DAN TERAPI MUROTAL AL-QUR'AN SURAH MARYAM TERHADAP KESEJAHTERAAN JANIN DI WILAYAH KERJA PUSKESMAS BANGETAYU SEMARANG*. Undergraduate thesis, Universitas Islam Sultan Agung Semarang. <http://repository.unissula.ac.id/26466/>
11. Fatmawati, Ery. (2023). *Perbedaan pengaruh pemberian stimulasi antara musik klasik dan murottal terhadap denyut jantung janin dan gerakan janin pada ibu hamil trimester ii serta iii*. <https://digilib.uns.ac.id/dokumen/detail/30537>
12. Islam, Ubes Nur. 2004. *Mendidik Anak dalam Kandungan: Optimalisasi Potensi Anak Sejak Dini*. Jakarta: Gema Insani, 2004, hlm. 2.
13. Kusrinah, "Pendidikan Pralahir: Meningkatkan Kecerdasan Anak dengan Bacan Al-Qur'an", *Jurnal SAWWA*, (Vol. 8, No. 2, tahun 2013), hlm. 278.
14. Karyati S. *Aplikasi terapi murottal Al-Qur'an dan komunikasi terapeutik sebagai upaya menurunkan tingkat kecemasan persalinan*. Dalam: *Proceedings of the 4th University Research Colloquium: MIPA dan Kesehatan; 27 Agustus 2016; Pekalongan, Indonesia*. Pekalongan: LPPM STIKES Muhammadiyah Pekalongan; 2016 hlm. 175– 82. Tersedia dari: https://publikasiilmiah.ums.ac.id/bitstream/handle/11617/7792/MIPA%20DAN%20KESEHATAN_22.pdf.
15. Alyensi F, Arifin H. *Pengaruh terapi murottal Qur'an terhadap intensitas nyeri persalinan kala I fase aktif di Bidan Praktik Mandiri (BPM) Ernita Kota Pekanbaru tahun 2017*. *J Kebidanan*. 2018;8(1):1–9.
16. Ghiasi A, Keramat A. 2018. *The effect of listening to Holy Quran recitation on anxiety: a systematic review*. *Iran J Nurs Midwifery Res*. 2018;23(6):411–20