



EFFECTIVENESS OF DANCE PREGNANCY MODIFICATION ON IMPROVING DEPRESSION LEVELS IN HIGH-RISK PREGNANT WOMEN

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Abstract

This study aims to evaluate the effectiveness of Pregnancy Dance modification on improving depression levels and serotonin hormone levels in high-risk pregnant women. The research design used was Quasi Experiment with the Nonequivalent Control Group Design approach. The number of samples in this study was 24 participants, which were divided into two groups: 12 samples of the intervention group and 12 samples of the control group. Based on the Wilcoxon test, the asymp. Sig <0.05 value indicates a significant difference between the pretest and posttest scores, which indicates a positive effect of Pregnancy Dance in reducing depression levels in high-risk pregnant women. After the intervention, there was a greater decrease in depression scores in the Pregnancy Dance group compared to the control group. The control group, which received pregnancy exercise intervention, also experienced a decrease in depression scores with an average decrease of 7.25. However, the analysis showed that the asymp. Sig value 0.000 <0.05, with a greater average decrease in scores in the intervention group than in the control group. In conclusion, although both activities are effective in reducing depression levels, Pregnancy Dance proved to be superior, especially in addressing anxiety and emotional stress, thanks to its more prominent elements of relaxation, body expression and social support.

Keywords: *Modification; Dance Pregnancy; Pregnancy Depression; Effectiveness*

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INTRODUCTION

In essence, pregnancy is a natural process, the changes that occur are physiological, not pathological (Hasriani & Resmawati, 2022). During pregnancy, the endocrine function of the placenta becomes wider to produce hormones, as well as the release of factors that affect the mother's circulation (Situmorang et al., 2020). These changes include physical and psychological changes. Primigravida pregnancy or also called the first pregnancy is a critical period where the prospective mother experiences new experiences, situations, and conditions that have never been experienced before and require all adjustments (Novita et al., 2020). A study found that compared to multiparous women, women who have given birth repeatedly have 42.2% less anxiety, while primiparous women have 66.25% discomfort (Permatasari & Dewi, 2023). For multiparous women, past pregnancy experiences make it easier for women to adapt to changes in their bodies during pregnancy and it is possible that multiparous women are also susceptible to depression caused by loose coping mechanisms and psychosocial factors (Aran et al., 2022).

Depression in pregnant women occurs when the pregnant woman's coping mechanisms fail during anxiety. Prenatal depression has a negative impact on fetal development and is one of the causes of premature birth and low birth weight (Asadzadeh et al., 2020). Factors that cause pregnancy depression include hormonal factors, demographic characteristics (parity history), past pregnancy and childbirth experiences, and women's psychological background. Depression is a mood disorder in the form of deep sadness that lasts a long time and interferes with normal life (Aran et al., 2022). Depression is a stage where a person is unable to eliminate the pressure that arises within him/her and indicates an emotional disorder (Aithal et al., 2019). People with depression usually experience typical psychological symptoms such as depression, constant sadness, easy to quarrel, easy to get angry and cheat, loss of enthusiasm for work, loss of self-confidence, difficulty concentrating, and decreased stamina (Trisnawati et al., 2025)..

This shows physical and social symptoms (Novrika et al., 2012). Symptoms of depression are classified into emotional, cognitive, motivational, and physical symptoms (Nga Ying Chan & Nga Ying, 2021). Treating depression in pregnant women is not much different from treating

depression patients in general. The right decision is only needed in giving antidepressants, taking into account the safety of the fetus, premature birth, and low birth weight babies (Anderson-Frazier, 2020). Complementary care can reduce the administration of antidepressants to pregnant women because it has an impact on the safety of the fetus in the womb (Aran et al., 2022).

The principle of complementary therapy is a therapy offered as a complement to existing service standards in obstetric services, including "Pregnancy Dance". Over time, pregnancy dance has not only developed into a ritual to maintain physical fitness, but also into a healthy lifestyle for the current generation and is also used as an alternative therapy for various physical and mental illnesses (Hellem et al., 2020).

Modification of pregnancy dance is a combination of several Papuan dance movements with breathing relaxation techniques which are literally a union of mind, body and soul (Aithal et al., 2019). In this exercise, each movement integrates the mind, body, and soul into a balanced whole. Pregnancy dance modification is a scientific art form and a form of health originating from Papuan culture. Various poses are intended to strengthen and shape body posture and calm and focus the mind to enter a changed state (Fitriahadi et al., 2020). The posture, breathing awareness, and relaxation techniques practiced in this dance focus the mind, slow down the nervous system, blood circulation system, and airways, and relax the body and mind.

Pregnancy dance modification is about increasing self-confidence, listening to the body, following the rhythm of breathing, and creating harmony in life (Mai et al., 2023). The movements arranged in this dance are movements that have been arranged as well as possible by each facilitator, adjusting to the needs or complaints of pregnant women. This research aims to determine the effectiveness of pregnancy dance modification on improving depression levels in high-risk pregnant women. This research provides solutions to pregnant women and health workers with health care problems, especially cases of depression in pregnant women.

METHOD

The research design used was Quasi Experiment with the Nonequivalent Control Group Design approach. This study take samples at the Puskesmas Sentani and RB AHBS Papua which

are located in Jayapura Regency. Respondents Study This as many as 24 respondents pregnant women with symptom depression use BDI-II scale (Beck Depression Inventory II). Respondent shared in a way random into two groups, namely group intervention and control groups each consisted of from 12 respondents. Analysis statistics done of the 24 respondents who completed all procedure study.

RESULT DAN DISCUSSION

Respondent Characteristic

Characteristics respondents including employment, education, and parity. The following is table 1 distribution frequency characteristics respondent study this :

Table 1. Characteristics Respondents group Interventions and groups Control

Characteristics Respondents	Group Control (n=12)		Group Intervention (n=12)		p-value
	n	%	n	%	
Work					
Work	5	41.7	7	58.3	1,000
No Work	7	58.3	5	41.7	
Total	12	100	12	100	
Education					
Tall	3	25.0	4	33.3	0.107
Intermediate	7	58.3	7	58.3	
Low	2	16.7	1	8.3	
Total	12	100	12	100	
Parity Status					
Primipara	7	58.3	6	50.0	0.242
Multipara	5	41.7	6	50.0	
Total	12	100	12	100	

*Chi Square Test

In table 1. results characteristics respondents presented obtained mark significance >0.05 means no there is the difference that significant between group control and also group experiment. Characteristics respondent based on work in groups experiment show that pregnant women more many are working namely 58.3% and in the group control more many do not work namely 58.3%. Characteristics respondent based on education show that in the group experiment and partial control big educated intermediate that is by 58.3%. Then characteristics respondent based on parity in groups experiment by 50% for each parity status and group control part big already not yet once give birth to by 58.3%.

Table 2. The Effect of Pregnancy Dance and Pregnancy Exercises on Depression in Pregnant Women with High Risk

Treatment Results	n	%	Pretest Mean±SD	Posttest Mean±SD	P-Value	n
Intervention (Pregnancy Dance)	12	100	17.67 ±4.355	9.75 ± 1.215	^b 0.000	12
Control (Pregnancy exercise)	12	100	16.75 ±3.361	13.08± 2.575	^a 0.002	12

^a *Wilcoxon test

^b * T-Test

Based on Table 2. shows that in the Wilcoxon test the value asymp.Sig < 0.05 then It means there is difference between pretest and posttest so that there is the influence of pregnancy dance on decline depression in pregnant women with risk tall.

Table 3. Differences Decrease Depression in Pregnant Women with High Risk

Type evaluation	Group	n	mean	P-value
Depression	Intervention	12	17.75	0,000
	Control	12	7.25	

*Mann Whitney test

Based on Table 3. shows that the pregnancy dance group had an average score of decline anxiety of 17.75. This is can concluded that there is decline score depression in pregnant women with risk tall after done giving peregnancy dance. In the group control have an average score decline depression is 7.25 which means it is also available decline score depression in pregnant women with risk tall after provision of prenatal gymnastics. The asymp.sig value is 0.000 < 0.05 then known there is difference control and intervention groups with mark average decrease more-big in group intervention compared to with group control.

DISCUSSION

Work is one of factors that can influence level anxiety in pregnant women. Pregnant women who work often experience combination - induced anxiety burden work and responsibilities answer house stairs. In general, anxiety and depression during pregnancy influence about 10–25% of women pregnant (Ami Ranita & Sri Hardjanti, 2016; Hasriani & Resmawati, 2022). This Condition can increase risk various complications, such as birth premature, depression postpartum, difficulties behavior in children, birth weight low,

and disturbance development and growth in children (Yu et al., 2020).

Anxiety levels in employed and non-employed individuals work own difference. Mother who doesn't work tend face anxiety from other factors besides work, because no feel pressure consequence burden work. On the other hand, mothers work more often experience stress triggered by demands work and responsibilities answer house stairs (Hasriani & Resmawati, 2022; Sánchez-Polán et al., 2021). Most of working mother reported experience anxiety. Work, as activity main for look for livelihood, often brings element necessity, which can become source pressure itself. This is confirm that anxiety felt mother work no solely originate from the preparation process childbirth, but also from burden work that alone (Yu et al., 2020).

Other research supports this matter this with state that work is one of factors that can trigger anxiety. Workload, such as feeling no competent in operate task or inability for reach maximum results, contribute to improvement anxiety in working individuals (Keramat et al., 2021).

Level of education own significant influence to level depression and anxiety in pregnant women. Mother with level more education low tend experience more depression high, because limitations understanding about health, access information, and skills in cope with stress (Hasriani & Resmawati, 2022). On the other hand, more formal education tall help somebody increase ability in face and resolve problem, so that capable reduce anxiety experienced (Ami Ranita & Sri Hardjanti, 2016; Wang et al., 2021).

Research conducted by Wang et al, shows that anxiety and depression in mothers pregnant with risk height is very related close with the educational status that is owned. Higher education tall give more knowledge well, possible individual for face situation with more rational and informed (Wang et al., 2021). With thus, the more tall level education someone, the more low risk the anxiety he experienced.

Parity a mother influenced by the level education and types the job he has. Based on research, 50% of respondents own level education intermediate. More education tall give convenience in accept information and education, so that help somebody own pattern think more rational. Mother with education tall generally to argue that amount the ideal child is two people (Ami Ranita & Sri Hardjanti, 2016).

In context anxiety, new mother first time giving birth (primigravida) tends to experience level anxiety currently until heavy (Hassanzadeh et al., 2020). This matter due to lack of experience in face pregnancy and childbirth first. On the contrary, in mothers who have pregnant previously (multigravida), anxiety felt generally influenced by experience pregnancy or labor previously, especially If experience the is negative (Hasriani & Resmawati, 2022). Besides that, mother with parity tall own greater risk big for experience complications pregnancy consequence frequency too early labor often, which can impact on conditions physical and psychological Mother (Keramat et al., 2021).

To mother pregnant, anxiety and fear generally increase approaching time childbirth. The more old age pregnancy, care and thoughts Mother more Lots focused on the birthing process, so that every changes that occur during pregnancy can become source stress. Based on results research, reported mothers who experience anxiety especially for mothers who have not own experience childbirth (Yu et al., 2020). More experience Lots known can increase confidence self mother in face childbirth.

Besides experience, lack of perception it is also right to be factors that influence level anxiety pregnant women. Many mothers look at labor as a very painful and fraught process suffering. Pregnancy child first often become phase imbalance in personality a woman, where she is must adapt with roles and responsibilities answer new as a mother. This is can trigger various feeling negative like anxiety, fear, restlessness, tension, and excessive anxiety.

The Effect of Pregnancy Dance and Pregnancy Exercises on Depression in Pregnant Women with High Risk

Based on research, found that mother previously pregnant experience depression while, after do exercise physique experience change positive psychology (Zhang et al., 2023). During pregnancy, mother experience change physical and psychological factors affected by fluctuations supporting hormones growth and development fetus. Changes psychological this covers feeling emotional, anxiety, stress, and increased sensitivity (Biaggi et al., 2016; Howard & Khalifeh, 2020). Lack of knowledge mother about changes that occur during pregnancy can to worsen condition psychological. Changes the relate with resistance in the arteries uterus consequence increasing level

nonadrenaline in blood plasma. This conditions bother flow blood to uterus, causing vasoconstriction that inhibits supply oxygen and nutrients to fetus, and increase risk birth weight low birth weight (LBW). Disorders psychological can also increase level hormone interacting corticotropin with hormone oxytocin, which can trigger uterine contractions and risk cause premature (Branson Dame et al., 2024; Sands et al., 2023).

Prenatal gymnastics, as exercise physical, can help reduce disturbance psychological. Prenatal gymnastics performed by the pregnant women, especially in the third trimester, works for reduce symptom depression (Ji et al., 2024a). This activity give benefit in the form of important relaxation for mother during pregnancy and childbirth. In addition help reduce disturbance psychologically, prenatal exercise also helps overcome pain and repair condition segment under the uterus which plays a role in labor physiological (Branson Dame et al., 2024; Ji et al., 2024a). This is supported by opinion Aithal, who state that pregnancy exercise give impact positive to condition psychological mother during pregnancy and childbirth (Aithal et al., 2019). The relaxation obtained through pregnancy exercises help mother arrange pattern breathing, so that He feel more calm and comfortable. In addition to prenatal gymnastics, other activities physique others, namely pregnancy dance, can also help reduce anxiety and depression in pregnant women (Anastasia, et al., 2025).

Pregnancy dance is type a dance that is ideal for women, because can give calm, flexibility, and strength during pregnancy. Besides that, pregnant women can manage energy body in a way balanced and feel impact positive in face problem or complaints that arise during pregnancy (Artiray et al., 2025). Research show that pregnancy dance has impact positive in reduce anxiety, especially in primigravida mothers who are facing the labor process (Novita et al., 2020). Movements in dance this nature calming and done in a way repeatedly, so that need concentration that can reduce anxiety and help overcome painful back (Demecs et al., 2011; Permatasari & Dewi, 2023). Besides that, dance movements can also strengthen muscles arms, chest, abdomen, and pelvis, as well as give effect muscle relaxation important abdomen and pelvis For smoothness childbirth.

Pregnancy dance also involves exercise relaxation that combines relaxation muscles and breathing. In exercise this, mother pregnant taught for send energy positive to in body the baby while

imagine condition baby inside uterus (Ribeiro et al., 2022). This is give influence appropriate relaxation with opinion Permatasari, who stated that imagine can make body become more relax (Permatasari & Dewi, 2023). Based on research by Ami, a woman who exercises in a way regular can increase energy, atmosphere heart, and price self they (Ami Ranita & Sri Hardjanti, 2016). Pregnancy dance can also be increase awareness Mother pregnant to his health, helping strengthen physical and functional body in a way natural, so that moment face pregnancy and childbirth, mother can go through the process with more good (Ji et al., 2024b; Mai et al., 2023).

Based on research, both pregnancy dance and pregnancy gymnastics own impact positive to subtraction level depression in pregnant women. However, there are difference in effectiveness both of them, where pregnancy dance tends to more superior in reduce level depression, especially in mothers pregnant with anxiety and stress emotional (Zhu et al., 2021). Pregnancy dance more emphasizes rhythmic movement and expression body, which helps stimulate release endorphins — hormones that play a role in increase atmosphere heart and reduce symptom depression (Cai et al., 2022; Ribeiro et al., 2022). The movements in pregnancy dance can also help reduce anxiety with a fun way, focused on relaxation physical and emotional (Marconcin et al., 2021). Besides that, activity this usually done in group, which provides chance for interaction social and support emotional, an important aspect for pregnant women for reduce feeling isolated.

Prenatal gymnastics, on the other hand, is more focused on training physical nature more structural and purposeful for increase fitness body as well as prepare physique pregnant women face labor (Sánchez-Polán et al., 2021). Although pregnancy exercise can reduce anxiety with increase condition physical, its influence to subtraction depression tend more limited to aspects physical and well-being body. Pregnancy exercise No always covers element emotional or social as in pregnancy dance. Research show that pregnancy dance more effective in reduce depression in pregnant women, especially Because aspect more emotional deep, interaction social that is formed during sessions, and impact more relaxation feel (Mai et al., 2023; Zhu et al., 2021). On the other hand, prenatal gymnastics more effective in overcome problem physical possible accompany pregnancy, such as painful back or complaint

physique others, but no own focus the same emotional like pregnancy dance.

CONCLUSION

In conclusion, although second activity this can beneficial, pregnancy dance proven more good in reduce level depression pregnant women, especially related with anxiety and stress emotional, because element relaxation, expression body, and support more social strong.

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