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EMPIRICAL VALIDATION OF A METHODOLOGY IN PREGNANT WOMEN

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Abstract
The present study evaluates the effectiveness of an 8-week motor activity program applied to 10 pregnant women in their second and third trimesters. The methodology incorporates a holistic approach tailored to the physiological characteristics of pregnancy. The results demonstrate a statistically significant reduction in both systolic and diastolic blood pressure, as well as a notable decrease in subjective levels of fatigue and stress. A moderate increase in body weight was observed, remaining within physiological norms. The findings support the positive impact of the intervention on the physical and psycho-emotional well-being of the participants.

Keywords: pregnancy, physical activity, fatigue, stress, blood pressure, holistic approach, physical health

Introduction

The empirical evaluation of the applicability and effectiveness of new motor activity methodologies during pregnancy [1,2,3] represents an important step toward optimizing the health status of expectant mothers. Maintaining physical activity during pregnancy is essential for both the physical and psycho-emotional well-being of women, as well as for the progression of a healthy pregnancy.

Contemporary wellness practices emphasize the need for holistic motor programs tailored to individual needs [4,5]. The growing interest in the effects of physical activity on women's health also includes the importance of emotional balance and adaptation. Research indicates that integrated approaches combining physical activity, nutrition, and psycho-emotional support improve both physiological and subjective indicators across different populations, including overweight women [6] and participants in wellness programs [7]. This underscores the need for scientifically grounded and adapted methodologies.

Innovations in education and the training of professionals in the wellness sector are key to the implementation of such programs [8,9], while research on the control of compensatory mechanisms in motor skills at an early age [10] highlights the importance of targeted and individualized approaches. This is particularly relevant in the development of motor programs for pregnant women.

As part of the present study, a specialized 8-week intervention was conducted with 10 women in their second and third trimesters of pregnancy. The intervention included a motor activity program utilizing a holistic approach, adapted to the gestational stage (Table 1).

Table 1.

GENERAL INFORMATION ABOUT THE PARTICIPANTS

No.	*Age (years)*	*Gestational Week at Start*	*Trimester*	*Number of Training Sessions Completed*	*Notes*
1	29	18	Second	16	No complications
2	33	22	Second	15	Mild fatigue
3	31	24	Second	14	No complications
4	35	28	Third	16	Temporary back pain
5	28	25	Third	15	No complications
6	30	30	Third	14	Mild water retention
7	32	26	Second	15	No complications
8	34	27	Third	16	Mild fatigue
9	27	25	Second	16	No complications
10	31	30	Third	15	No complications

Methodology

The presented data illustrate changes in key physiological and subjective indicators in 10 participants before and after the implementation of the motor activity program. A trend toward moderate weight gain was observed in all participants, with some individuals experiencing increases of up to 3 kilograms. Both systolic

and diastolic blood pressure showed a slight decrease following the intervention, which

Results

may be interpreted as a positive effect on the cardiovascular system.

There was also a notable reduction in subjective assessments of fatigue and stress – almost all participants reported a decrease of 2 to 3 points on a 10-point scale. These findings indicate a beneficial impact of the motor program on the participants' psycho-emotional well-being.

Table 2

KEY INDICATORS BEFORE AND AFTER THE IMPLEMENTED MOTOR ACTIVITY PROGRAM

No.	*Body Weight (kg) Before*	*Body Weight (kg) After*	*Blood Pressure (syst./diast.) Before*	*Blood Pressure (syst./diast.) After*	*Fatigue Rating (1–10) Before*	*Fatigue Rating (1–10) After*	*Stress Rating (1–10) Before*	*Stress Rating (1–10) After*
1	62	64	120/80	115/75	6	3	7	4
2	70	73	125/82	120/78	7	4	8	5
3	65	67	118/79	116/76	5	3	6	3
4	75	78	130/85	125/80	8	5	9	6
5	68	70	122/80	118/78	6	3	7	4
6	66	68	124/82	120/79	7	4	8	5
7	70	72	123/80	117/75	6	3	7	4
8	69	71	126/84	122/78	7	4	8	5
9	61	63	119/77	115/74	5	2	6	3
10	66	69	124/81	120/78	6	3	7	4

The summarized statistics (Table 3) present the mean values and standard deviations of key physiological and psycho-emotional indicators before and after the implementation of the Nesheva Motor Activity Program. The data reveal statistically significant changes in body weight, arterial blood pressure, as well as in subjective assessments of fatigue and stress. These findings indicate the positive impact of the program on the overall physical and mental condition of the participants (Bulgarian pregnant women).

Table 3

SUMMARY STATISTICS (MEAN VALUES ± STANDARD DEVIATION)

Indicator	*Before Intervention*	*After Intervention*	*Statistical Significance (p)*
Weight (kg)	65.9 ± 5.3	67.8 ± 5.4	0.01
Systolic Blood Pressure (mmHg)	122.7 ± 4.2	118.0 ± 3.5	0.001
Diastolic Blood Pressure (mmHg)	80.6 ± 2.9	77.0 ± 2.3	0.002
Fatigue (1–10)	6.3 ± 0.8	3.5 ± 0.8	<0.001
Stress (1–10)	6.9 ± 0.8	4.0 ± 0.8	<0.001

The analysis of data from a two-month motor activity program for women with normal pregnancies aimed to assess its impact on physical health indicators (weight, blood pressure) and subjective factors (fatigue and stress) in women in their second and third trimesters. The average body weight increased by approximately 1.9 kg during the study period (from 65.9 ± 5.3 kg to 67.8 ± 5.4 kg). This change was statistically significant ($p = 0.01$), which is expected and normal during pregnancy. The moderate weight gain suggests a healthy progression of pregnancy without excessive accumulation. Both systolic and diastolic blood pressure showed a significant reduction following the intervention (systolic from 122.7 to 118.0 mmHg, diastolic from 80.6 to 77.0 mmHg). This is a very positive result, indicating that motor activity contributed to improved cardiovascular function and may reduce the risk of hypertension during pregnancy. Fatigue and stress, as subjective indicators, demonstrated the following trend: average fatigue levels decreased from 6.3 to 3.5, and stress levels from 6.9 to 4.0 on a 10-point scale. These data reflect a significant improvement in the mental and emotional state of the women, likely due to the holistic and movement-based approach of the innovative and socially significant Nesheva Program.

Table 4.

SYSTEMATIC REVIEW OF MOTOR ACTIVITY PROGRAMS FOR PREGNANT WOMEN IN BULGARIA, WITH A FOCUS ON SCIENTIFIC VALIDITY№	Program Name	Created by / Institution	Main Characteristics	Scientific Validation
1	**Holistic Motor Program for Pregnant Women (Nesheva Program)**	National Sports Academy, 2010, Assoc. Prof. Dr. Irina Nesheva, Bulgaria, Sofia	Scientifically developed, socially significant with a holistic approach; aims to support physical, mental, and emotional health of the mother and fetal quality	**Yes**
2	**Functional Bodies – Online Program**	Private project (online)	Breathing techniques, pelvic floor exercises, tai chi, doula guidance	No
3	**FEIA Pregnancy (Mobile App)**	Private team (app)	Yoga, gymnastics, pedometer, symptom diary, hydration tracking, etc.	No
4	**Harmonious Pregnancy – Mission Mama**	Private center	Gymnastics, prenatal education, newborn care advice	No
5	**Individual Program – RoriFit**	Private fitness instructor	Nutrition plan, pregnancy-safe exercises	No
6	**Gymnastics – Medical Center "Quality of Life"**	Medical center	Physical exercises for posture, breathing, tone, and pain prevention	No
7	**Pregnancy School "I for Mama"**	Private project (seminars)	Free courses, lectures and consultations for pregnant women and young mothers	No

Conclusion

The conducted study demonstrates that a structured and scientifically validated motor activity program – such as the Nesheva Program – can positively influence the physical and psycho-emotional well-being of pregnant women. Statistically significant improvements in blood pressure, fatigue, and stress levels support the effectiveness of the holistic approach applied over the eight-week intervention. A review of other available programs in Bulgaria reveals a lack of scientific validation, highlighting the need for more evidence-based and professionally developed interventions for expectant mothers. These findings emphasize the importance of integrating research-backed practices into prenatal care to promote healthier pregnancies and maternal well-being.

Note:

Conflict of Interest: No conflict of interest was declared by the author and the institution.

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References

1. Artal, R., & O'Toole, M. (2003). Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *British Journal of Sports Medicine, 37*(1), 6–12.

2. Barakat, R., Pelaez, M., Montejo, R., Luaces, M. & Zakynthinaki M. (2011). Exercise during pregnancy improves maternal health perception: A randomized controlled trial. *American Journal of Obstetrics and Gynecology,* 204(5):402.e1-7, DOI: 10.1016/j.ajog.2011.01.043

3. Nascimento, S. L., Surita, F. G., & Cecatti, J. G. (2012). Physical exercise during pregnancy: A systematic review. *Current Opinion in Obstetrics and Gynecology, 24*(6), 387–394.

4. Ignatova D. & Angelova, P. (2024). Nutritional and motor Wellness – Basis for harmonious development. *International Scientific journal Smart Innovations in Recreational, Wellness Industry and Niche Tourism.* Vol. 6 (Iss. 2), pp. 7-14, eISSN 2603-4921 (online). (Available at: https:/ https://scjournal.globalwater health.org/)

5. Dimitrova, B. (2023). Educational policy, specialised staff, innovations and recreational industry. *Strategies for Policy in Science and Education*, Vol. 31, (Iss. 5), pp. 532 - 546, DOI:10.53656/str2023-5-5-edu

6. Angelcheva, M. (2023). Complex SPA program effect on overweight women's physical condition

and well-being - *Trakia Journal of Sciences* St. Zagora, 2023, Vol. 21, (Suppl.1), 556-560, eISSN 1313-3551. COBISS.BG-ID -1121722084 (Available from:https://s.shopeee.com/uwKq) DOI:10.15547/tjs.2023.s.01.092

7. Popova-Dobreva D. (2023). Health Promotion in Certified SPA and Balneotherapy (Medical SPA) Centres in Stara Zagora Region. *SHS Web of Conferences EDP Sciences*, Vol. 176, (p. 01007), pp.1-5. eISSN: 2261-2424

8. Dimitrova, B., (2020). Relationships between education and innovations in the recreational Industry in Bulgaria. *Trakia Journal of Sciences*, 18, No 3, 194-202. ISSN: 1313-3551 (online). Available from: https://short-link.me/1cuqF. DOI: 10.15547/tjs.2020.03.003

9. Dimitrova B. (2025). Niche tourism – Innovations and quality culture in specialized workforce development *German International Journal of Modern Science (Deutsche Internationale Zeitschrift für Zeitgenössische Wissenschaft – DIZZW- https://dizzw.com/zeitschriftenarchiv/*) №101, p.88-93, eISSN: 2701 8377, DOI: 10.5281/zenodo.15124768 (Available at: https://zenodo.org/records/15124768?utm_source=chatgpt.com)

10. Dimitrova N. (2025). Control of compensatory mechanisms of upper extremity strength abilities in preschool age. , German International Journal of Modern Science / Deutsche Internationale Zeitschrift für Zeitgenössische Wissenschaft; Mar2025, Issue 100, p28-31, 4p, DOI 10.5281/zenodo.15061526, https://doi.org/10.5281/zenodo.15061527, Available online at:https://research.ebsco.com/c/ylm4lv/search/details/4rprvjplzf?limiters=RV%3AY%2CDT1%3A2024-05-03%2F2025-05