THE STUDY ON THE QUALITY OF LIFE OF PREGNANT WOMEN IN THE PREPARTUM PERIOD

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Abstract: *The aim of the research undertaken proposed three major directions of investigation, namely: the assessment of the quality of life of women in the prepartum and postpartum period; determining the level of knowledge of the phenomenon of practicing physical exercise in the prenatal and postpartum period; determining the links between the quality of life perceived by the pregnant woman in the prepartum period and the manifestation of the desire to return to the pre-pregnancy physical form in the postpartum period. The analysis of the data obtained following the application of the quality of life assessment questionnaire on a sample of 50 pregnant women will represent a preliminary exploratory research on the entire phenomenon of physical exercise during the prepartum and postpartum periods. This research will provide us with the preliminary data and will be able to open our horizon to a more thorough research that will include both the study of the quality of life of pregnant women and the way to implement physical exercise programs in the prepartum and postpartum period.*

Keywords: prepartum period, postpartum period.

INTRODUCTION

Worldwide, statistical data on natural increase highlight the fact that the number of births is twice as high as the number of deaths reported annually, and this index is continuously increasing in favor of the birth rate.[1] In Romania, however, the phenomenon is the following: in 2015 the population was 19,870,647 inhabitants and

[1] https://www.worldometers.info/ro/

will undergo a process of decrease until the year 2050, reaching 16,331,359 inhabitants, less by 3,539,288 inhabitants, which means a decrease of 17.8% of the population. Developed countries such as Austria, Belgium, Switzerland, France, Italy, United Kingdom will experience significant growth by 2050, while Poland, Croatia, Bulgaria, Estonia, Slovakia will experience population declines compared to 2015. Romania is among the countries with the largest population decline.[2]

Thus, we can affirm the fact that special attention must be paid to this complex process which is represented by conception, the prepartum period, birth and the postpartum period. Initially, pregnant women were considered to be part of a vulnerable category of people and they were recommended to reduce their level of physical activity during the gestational period. In 2002, the American College of Obstetrics and Gynecology (ACOG) developed a series of recommendations regarding physical exercise during pregnancy, these being less restrictive; they were updated by ACOG in 2009

However, a survey conducted among gynecologists and obstetricians, as well as among family physicians, revealed that more than 60% of them are not familiar with the current ACOG guidelines for physical exercise during pregnancy and emphasizes the lack of knowledge in this field.[3] Scientific studies on exercise during pregnancy have led to an important development of knowledge in this area.

The realization of most research of this kind appeared, mainly, against the background of the existence in specialized publications of some controversies regarding the effects that these practices have on mothers and daughters. Research to date reveals benefits that include reduced caesarean section rates, adequate maternal and fetal weight gain, and reduced incidence of gestational diabetes.

Research objectives

a) Determining the effects of sedentarism in the prenatal period

[2]Raport național privind starea de sănătate a populației, României, 2017 accesat la https://insp.gov.ro/sites/cnepss/wp-content/uploads/2018/11/SSPR-2017.pdf
[3]https://www.acog.org/clinical

b) Identifying the causes that determine the appearance of sedentarism in the prenatal period

c) Analysis of factors that can improve the quality of life of pregnant women who practiced physical exercise during the prenatal period

Research tasks

To achieve the research objectives, the following tasks are foreseen:

a) the study of the specialized bibliography;

b) developing and applying the questionnaire to the sample of investigated subjects;

c) collection and centralization of data obtained following the application of the questionnaire;

d) statistical analysis and interpretation of the results of the data obtained following the application of the questionnaire.

Research hypotheses

1. The state of health of the pregnant woman in the first trimester of pregnancy significantly influences the state of health of the woman in the third trimester of pregnancy.

2. Health status differs significantly for pregnant women who exercised prenatally compared to those who did not.

B. Research methods

- ✓ The specialized bibliographic study method
- ✓ In order to know the scientific foundations of the evolution of the mother's body and the fetus, as well as the physiological changes that occur, both in the prepartum and postpartum period, we followed the level of spread of the phenomenon of physical exercise, in different areas of the globe where significant data could be identified from a scientific point of view.

The survey method by questionnaire

It represents a complex technique of sociological research that involves several stages. Opinion survey by questionnaire is defined as a very good means of explaining human behaviors and identifying the factors that determine these behaviors.[4]

Exploratory research method

This method has as its main purpose the development of new relevant hypotheses in order to continue the investigations and is based on obtaining answers to questions such as: What? Who? How much? Where?

And to obtain these answers, the application of surveys or questionnaires is recommended.

Content analysis

This is a research technique aimed at collecting and structuring information in a format that can enable researchers to identify possible interference in information collected from multiple individuals. Content analysis is used in most social sciences and is a continuous topic of debate between adherents of quantitative analysis and adepts of qualitative analysis. Content analysis is interpreted as a technique aimed at describing, with optimal objectivity, precision, and generality, what is said about a given subject, in a given place, at a time of".

Statistical analysis method

Statistical analysis involves the use of some calculation methods or some strings of statistical data with the aim of testing certain qualities, establishing the existence of some relationships, determining the types of relationships or the significance of the relationships between the studied data.

Research subjects

The research subjects are represented by 50 pregnant women at the beginning of the gestational period. Pregnant women were given a questionnaire in each trimester of pregnancy in order to be able to monitor and record as thoroughly as possible all the changes felt during the gestational period.

[4] V. Miftode, 1995, Metode de cercetare in psihologie, pag.245

Research tools

The questionnaires used were aimed at determining the following aspects:

- quality of life from the point of view of pregnancy evolution;
- the pregnant woman's perception of the gestational period through the lens of health problems prior to pregnancy;
- the level of daily physical activity before pregnancy and during the gestational period;
- addictions manifested before pregnancy or during it.

Research results

1. The correlation coefficient between the variables that evaluate the health status of pregnant women

An average negative correlation is observed between the health status of pregnant women and the weight level (-0.53). This correlation highlights the negative effect of under/overweight/obesity of pregnant women on the general state of health. These negative effects can be avoided by practicing daily physical exercises as demonstrated by the small (0.42) but relevant correlation between ExCotidian and health (Table 1).

Table 1. The correlation coefficient between the variables that evaluate the health status of pregnant women

	Age	Home	Studied	Income	Task	Birth	Ponder	Health	Exercise daily	Smoking	Alcohol	Chronic diseases	Other ailments	Joint pain	Stress	Rest
Age	1,00															
Home	0,04	1,00														
Studied	0,50	-0,10	1,00													
Income	0,14	-0,37	0,32	1,00												
Task	0,34	-0,28	0,27	0,33	1,00											
Birth	0,35	-0,25	0,33	0,05	0,39	1,00										
Ponder	0,29	-0,21	0,34	0,13	0,22	0,23	1,00									
Health	-0,04	0,11	-0,19	-0,03	-0,21	-0,21	-0,53	1,00								
Exercise daily	0,10	0,05	0,05	-0,16	-0,20	0,14	-0,25	0,42	1,00							
Smoking	-0,02	0,08	0,03	-0,14	0,15	0,13	0,21	-0,26	-0,12	1,00						
Alcohol	-0,26	-0,12	-0,23	0,05	0,13	-0,05	-0,07	-0,32	-0,27	0,36	1,00					
Chronic diseases	0,23	-0,15	0,24	0,20	0,18	0,26	0,08	-0,03	0,05	0,23	0,05	1,00				
Other ailments	-0,01	0,07	-0,02	-0,06	0,12	-0,01	0,22	-0,28	-0,28	0,15	-0,06	-0,17	1,00			
Joint pain	0,08	0,00	0,17	-0,04	0,02	0,02	0,17	-0,28	-0,31	0,30	0,39	0,06	-0,08	1,00		
Stress	-0,32	0,02	-0,32	-0,03	-0,39	-0,15	-0,31	0,43	-0,07	-0,17	-0,09	0,06	-0,22	-0,27	1,00	
Rest	0,24	0,06	0,09	-0,01	-0,07	0,03	-0,12	0,34	0,20	-0,42	-0,48	-0,07	-0,13	-0,23	0,17	1,00

Between pregnancy and delivery there is a small positive correlation (0.39), which indicates that in general pregnant women who are in their second/third pregnancy prefer caesarean section, although there are also pregnant women who in this situation opt for normal delivery. Also, there is a small negative correlation between pregnancy and stress (-0.39), which can be explained by a lower level of stress associated with the second/third pregnancy.

Pregnant women know what to expect and are more relaxed. The weak negative correlation between rest and smoking (-0.42), alcohol (-0.48) denotes that excess alcohol and smoking are associated with some degree of fatigue. The weak positive correlation between joint pain and alcohol (0.39) may be coincidental. A positive average correlation is observed between education and age. Pregnant women who are older also have more studies. The other values are too small to be relevant in our analysis.

Quarter I

A very strong positive correlation is observed between the option of physical exercise and the effects of exercise (0.95), which means that the more obvious the effects of physical exercise, the more determined pregnant women are for their practice.

A very strong positive correlation is observed between family support - exercise option (0.81) and the effects of exercise (0.77), which means that the more support pregnant women get from their family, the more determined they are in their practice, and the effects are more obvious (Table 2).

Table 2. The correlation coefficient between the variables that evaluate the state of pregnant women in the first trimester

	I.Physical exercise	I.Number of sessions	I.Organized	I.Info-Physical exercise	I.Recommandation	I.Family support	I.Option-Physical exercise	I.Effects of exercise
I.Physical exercise	1,00							
I.Number of sessions	0,95	1,00						
I.Organized	0,52	0,61	1,00					
I.Info-Physical exercise	0,48	0,46	0,25	1,00				
I.Recommandation	0,42	0,47	0,50	0,25	1,00			
I.Family support	0,60	0,64	0,42	0,48	0,52	1,00		

I.Option-Physical exercise	0,65	0,69	0,43	0,39	0,64	0,81	1,00	
I.Effects of exercise	0,59	0,63	0,42	0,37	0,65	0,77	0,95	1,00

A positive average correlation is observed between the organized framework and physical exercise (0.52), number of sessions (0.61), doctor's recommendation (0.5), which highlights the importance of the doctor's recommendation in practicing physical exercises. Pregnant women who practiced physical exercise in an organized setting participated in several sessions per week and at the doctor's recommendation.

The importance of medical recommendation is also highlighted by the correlation between recommendation and family support (0.52), the option of physical exercise (0.64), the effects of exercise (0.65). Pregnant women who received a recommendation to practice physical exercises from the doctor also received support from the family in this regard, they opted to practice physical exercises further and have higher expectations regarding their effects, namely maintaining the physical appearance, weight control and muscle toning. The other pregnant women do not pursue these goals.

Number of sessions has a medium positive correlation with family support (0.60), exercise option (0.65) and exercise effects (0.59) indicating that pregnant women who practice a higher number of exercise sessions per week they have higher expectations of them, have more family support and are more determined to continue their practice.

A small positive correlation is observed between information on physical exercise, physical exercise (0.48) and number of sessions (0.46), as well as between recommendation and physical exercise (0.42) and number of sessions (0.47), which highlights the fact that information pregnant women's correct understanding of the effects of physical exercise and the doctor's recommendation leads to a greater number of physical exercise sessions.

Overall, all the correlations in this table show that correct information, doctor's recommendation, family support are favorable factors in practicing physical exercise, which in turn (ex. physical) has positive effects on the health of pregnant women, on their expectations and on additional motivation to practice physical exercises.

For **Quarter II** of pregnancy, a very strong positive correlation is observed between physical exercise and doctor's opinion (0.92), number of sessions (0.97), organized framework (0.76), muscle fever (0.91), recovery (0.72) , continuity (0.92), agreement (1) which means that physical exercise and its intensity is favored by the doctor's opinion, by its performance in an organized setting.

Pregnant women who practiced intense exercise developed muscle fever and received recommendations from the coach to restore the body after exercise. They want to continue medical physical exercises and have the doctor's opinion (very strong positive correlation organized framework - continuity =0.83, between organized framework-agreement=0.76, as well as between agreement-continuity=0.92). (Table 3).

Pregnant women who practice physical exercise in an organized setting tend to practice more sessions per week (very strong positive correlation between number of sessions – organized setting =0.81).

Table 3. The correlation coefficient between the variables that evaluate the state of pregnant women in the second trimester

	II.Physical exercise	II.Opinion	II.Number of sessions	II.Organized	II.Joint muscle discomfort	II.Muscle soreness	II.Restoration	II.Articular mobility	II.Effort capacity	II.Continuity	II.Ageement
II.Physical exercise	1,00										
II.Opinion	0,92	1,00									
II.Number of sessions	0,97	0,89	1,00								
II.Organized	0,76	0,70	0,81	1,00							
II.Joint muscle discomfort	0,38	0,35	0,31	0,33	1,00						
II.Muscle soreness	0,91	0,84	0,86	0,63	0,50	1,00					
II.Restoration	0,72	0,66	0,77	0,95	0,18	0,55	1,00				
II.Articular mobility	0,42	0,34	0,43	0,51	-0,10	0,25	0,57	1,00			
II.Effort capacity	0,32	0,25	0,38	0,38	-0,08	0,24	0,43	0,50	1,00		
II.Continuity	0,92	0,84	0,93	0,83	0,26	0,83	0,78	0,50	0,39	1,00	
II.Ageement	1,00	0,92	0,97	0,76	0,38	0,91	0,72	0,42	0,32	0,92	1,00

They developed muscle fever (very strong positive correlation number of sessions – muscle fever=0.86) and received recommendations from the trainer for body recovery after exercise (very strong positive correlation number of sessions – recovery =0.77 as well as between organized framework-musc fever= 0.95).

For **Quarter III** of pregnancy the interpretation is very similar to the second trimester.

A very strong positive correlation is observed between physical exercise and doctor's opinion (0.76), number of sessions (0.97), organized framework (0.97), muscle fever (0.90), recovery (0.72), continuity (0.83), agreement (1) which means that the practice of physical exercise and its intensity is favored by the doctor's opinion and its performance in an organized setting.

Pregnant women who practiced intense exercise developed muscle fever and received recommendations from the coach to restore the body after exercise. They want to continue medical physical exercises and have the doctor's opinion (very strong positive correlation ex. physic - continuity =0.83, between continuity-opinion=0.77, continuity-number of sessions = 0.86, as well as between continuity-organized=0, 88). (Table 4).

Pregnant women who received recommendations from the coach to restore the body after exercise have better joint mobility, greater exercise capacity and the desire to continue practicing physical exercise (very strong positive correlation III recovery – III mobility art =0.71, between III recovery – III capacity _exercise =0.72 as well as between III restoration –III continuity=0.88).

They developed muscle fever (very strong positive correlation III continuity – III fever musc=0.73) and received recommendations from the coach to restore the body after exercise (very strong positive correlation III number of sessions – III recovery =0.77 as well as between III organized-III fever musc= 0.95).

A very strong positive correlation is observed between III capacity effort – III mobility art =0.76.

Table 4. The correlation coefficient between the variables that evaluate the state of pregnant women in the III trimester

	III.Physical exercise	III.Opinion	III.Number of sessions	III.Organized	III.Joint muscle discomfort	III.Muscle soreness	III.Restoration	III.Articular mobility	III.Effort capacity	III.Continuity	III.Option
III.Physical exercise	1,00										
III.Opinion	0,76	1,00									
III.Number of sessions	0,97	0,81	1,00								
III.Organized	0,76	0,79	0,81	1,00							
III.Joint muscle discomfort	0,56	0,24	0,51	0,24	1,00						
III.Muscle soreness	0,90	0,62	0,85	0,71	0,62	1,00					
III.Restoration	0,72	0,73	0,77	0,95	0,27	0,63	1,00				
III.Articular mobility	0,49	0,55	0,55	0,67	0,08	0,36	0,71	1,00			
III.Effort capacity	0,48	0,57	0,54	0,68	0,03	0,31	0,72	0,76	1,00		
II.Continuity	0,83	0,77	0,86	0,88	0,37	0,73	0,88	0,64	0,64	1,00	
II.Opinion	-0,05	-0,11	-0,05	-0,11	0,09	-0,05	-0,12	-0,44	-0,14	-0,11	1,00

CONCLUSIONS

The pregnancy trimester variable has a decisive influence on the state of the pregnant woman, a hypothesis confirmed by the Alpha value = 0.90, which indicates that the state of health of the pregnant woman in the first trimester has a positive and strong influence on the state of health of the pregnant woman in the third trimester, compared to the following indicators: joint pain, smoking, alcohol consumption, rest, weight level.

In the first trimester of pregnancy, the results show a very strong positive correlation between: the option of physical exercise and the effects of exercise (0.95), which means that the more obvious the effects of physical exercise, the more determined pregnant women are (opt for) for their practice; a very strong positive correlation is observed between family support, exercise option (0.81) and exercise effects (0.77), which means that the more support pregnant women get from their family, the more determined they are (opt) in their practice, and the effects are more obvious.

Overall, correct information, doctor's recommendation, family support are favorable factors in practicing physical exercise, which in turn (e.g. physical) has

positive effects on the health of pregnant women, on their expectations and on the additional motivation to practice physical exercise starting from first trimester of pregnancy.

For the second trimester of pregnancy, the data show a very strong positive correlation between physical exercise and the doctor's opinion (0.92), number of sessions (0.97), organized framework (0.76), muscle fever (0.91), recovery (0 .72), continuity (0.92), agreement (1) which means that physical exercise and its intensity is favored by the doctor's opinion and by carrying out the activity in an organized setting.

In the third trimester, pregnant women who received recommendations from the coach to restore the body after exercise, have better joint mobility, greater exercise capacity and the desire to continue practicing physical exercise (very strong positive correlation III recovery – III mobility art =0, 71, between III recovery-III capacity effort=0.72 as well as between III recovery-III continuity=0.88).

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