

STUDY OF PHYSICAL ACTIVITY AND DIETARY INTERVENTIONS FOR WEIGHT MANAGEMENT DURING PREGNANCY OF BULGARIAN WOMEN

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Abstract: *These The term 'weight management' includes: assessing and monitoring body weight; preventing someone from becoming overweight (body mass index [BMI] 25–29.9 kg/m²) or obese (BMI greater than or equal to 30 kg/m²); helping someone to achieve and maintain a healthy weight before, during and after pregnancy by eating healthily and being physically active and gradually losing weight after pregnancy (www.nice.org.uk). A survey was conducted with 717 Bulgarian women between 19 and 35 years of age. The purpose of the study is to determine advice and support for weight control during pregnancy. A section has been included at the end so that women can add any further comments they may have about their experience. Characteristic of women is made by age, BMI and occupation. A discussion was held on the level of women's awareness and professional support.*

Key words: *weight management, pregnancy, of physical activity, dietary interventions.*

1. Introduction

The problem of weight management during pregnancy is explored by many researchers. When researching in the PubMed medical database using keywords "weight management during pregnancy" we found a large number of scientific publications [9].

The term 'weight management' includes: assessing and monitoring body weight; preventing someone from becoming overweight (body mass index [BMI] 25–29.9 kg/m²) or obese (BMI greater than or equal to 30 kg/m²);

helping someone to achieve and maintain a healthy weight before, during and after pregnancy by eating healthily and being physically active and gradually losing weight after pregnancy [8].

Women who are pregnant and have a high BMI are at elevated risk of obstetric complications including gestational diabetes, preeclampsia, caesarean birth and postoperative infections, and they require longer postpartum hospital stays [13]. Their babies are also significantly more likely to be large for gestational age and require neonatal intensive care [2, 3].

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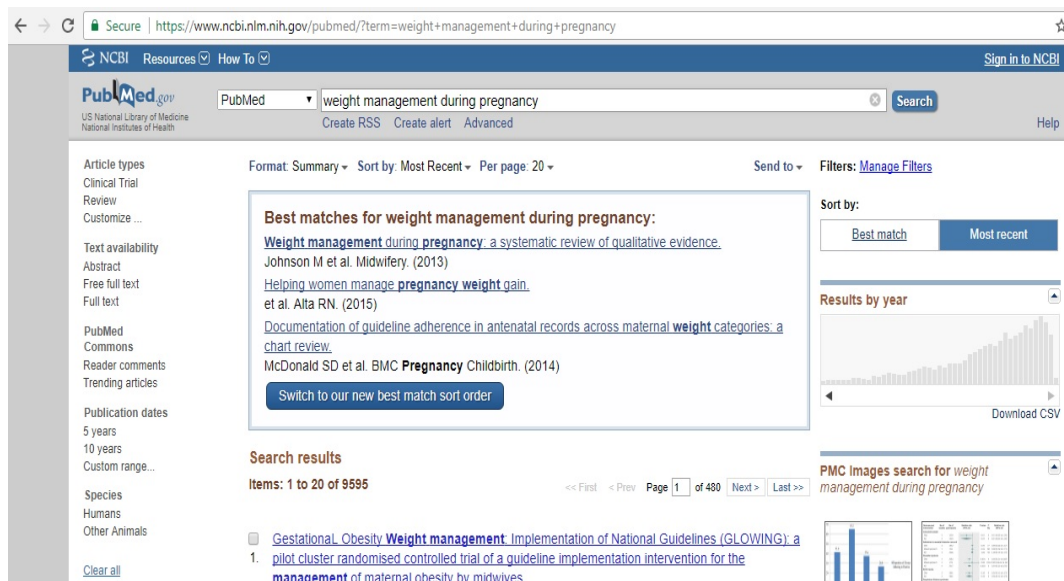


Fig. 1. PubMed

National and international guidelines for weight management in pregnancy are focused on diet and exercise recommendations, sometimes coupled with specific information about risks to maternal or fetal health [3], [5, 6], [8].

According to [3] as obesity in pregnancy has significant health implications for mothers and their babies, it is important that women receive appropriate and effective pregnancy care. This study indicates that many women would benefit from additional weight management information and support prior to conception, during pregnancy, and postnatally.

Johnson M et al. (2013) think that the complexity of interactions with advice sources, bodily changes, feelings of control, as well as perceived risks may explain the relative ineffectiveness of weight management interventions during pregnancy. Focusing on healthy diet and physical activity levels may be

more useful and less stigmatizing than focusing on weight [4].

2. Methodology

A survey was conducted with 717 women aged 19 to 35 through a Facebook marketing study.

A standardized questionnaire “Weight management before, during and after pregnancy”, National Institute for Health and Clinical Excellence, 2010 [8] was used.

The results presented in this article are part of the overall study, including issues related to pregnancy.

The studied group was characterized by age, BMI prior to their last pregnancy, occupation. The results of the study are presented by frequency analysis.

3. Results

The average age of the 717 women surveyed was 26.67 years.

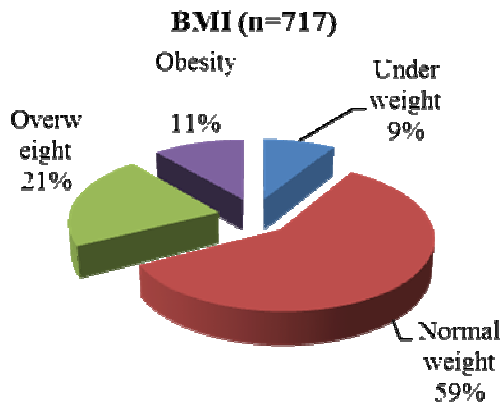


Fig. 2. Body mass index before pregnancy (kg/m^2)

Figure 2 shows BMI before the last pregnancy of women. Fifty-nine percent of women surveyed fall into the category of those with normal BMI. Twenty-one percent are overweight, and 11% were obese.

These results demonstrate that one third of studied group of women in active reproductive age have problem overweight. It should also be taken into account that 9% of the respondents are underweight.

Today, we have a culture and a public image of beauty that encourages a significant part of young women to drastically limit their intake of food, a trend no less dangerous than excessive intake of low quality preservatives-containing and fast food. The resulting general results suggest that nutritional disorders may be associated with 41% of the women surveyed by us.

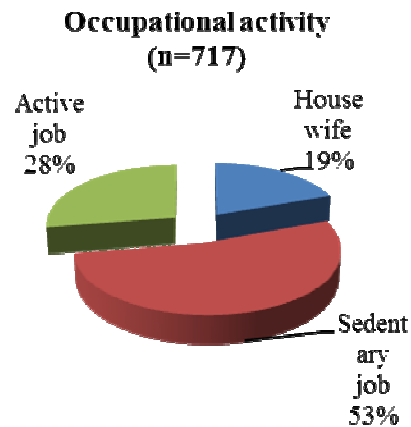


Fig. 3. Occupational activity

The largest percentage of women have sedentary occupation (53%). The sedentary lifestyle as a whole is proven to be a major factor in overweight and obesity occurrence. Twenty-eight percent of women surveyed have a profession that requires physical activity. It is noteworthy that a significant percentage of women (19%) are housewives.

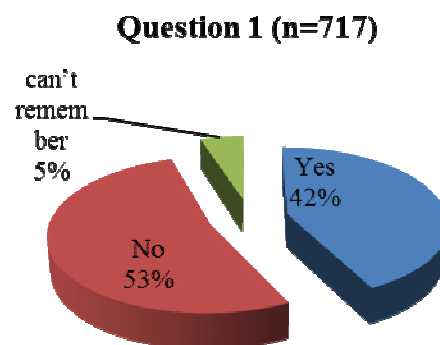


Fig. 4. Question 1 Did the GP/ gynecologist or midwife talk to you about your eating habits?

The women's responses show that in 42% of the cases there were discussions related to eating habits. Although the percentage in absolute terms is not small,

it is in fact worrying because diet during pregnancy is an important factor in the development of pregnancy.

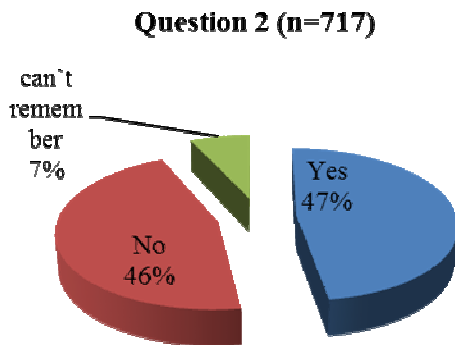


Fig. 5. Question 2 Did the GP/ gynecologist or midwife talk to you about the fact that it is a myth that you need to 'eat for two' while pregnant?

The question thus raised is again related to information provided by specialists on the diet of pregnant women.

The results are similar. Forty-seven percent of women have been advised not to eat for two while pregnant. Given the modern living conditions in Bulgaria, despite the existence of various social strata and relevant groups of people with different financial capabilities, food temptations are rather accessible.

In fact, ensuring a balanced diet with quality products is a matter not only of knowledge but also of good financial capacity. Fast food, pasta, pizza, and so on, which are rather unsuitable, are far more inexpensive.

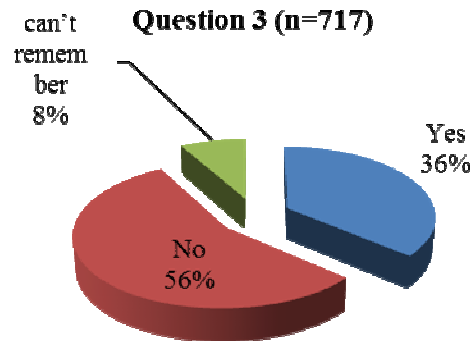


Fig. 6. Question 3 Did the GP/ gynecologist or midwife talk to you about how physically active you are?

Fifty-six percent of the women surveyed have not received advice on the appropriate degree of physical activity during pregnancy.

The normal pregnancy, although a physiological process, proceeds with its corresponding characteristics. An individual approach is always needed, but general indications of the nature of motor activity are needed for every pregnant woman.

In cases of pathological pregnancy, depending on the nature of the pathology and the individual condition of the pregnant woman, the motor activity should be even more precise.

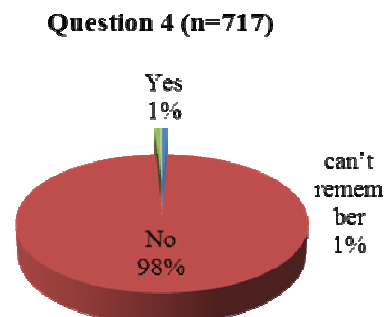


Fig. 7. Question 4 Were you offered a referral to a dietitian (someone who is an expert in food and nutrition)?

In ninety-eight percent of cases, health professionals did not suggest that pregnant women should contact a dietitian or nutritionist. The results show a lack of popularity of the idea of consulting a nutritionist during pregnancy.

We assume that some women are aware of the need for a special diet. This, on the one hand, would be useful to them, and on the other hand it might be a reason to simply seek information on the Internet. The risks of often unreliable and anonymous information posted on various sites are well-known to the narrow experts in every field.

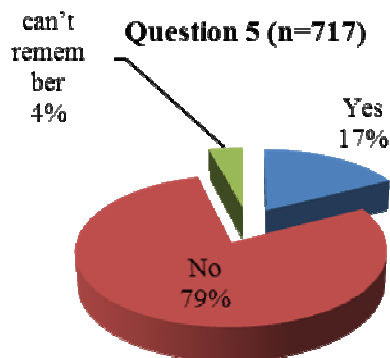


Fig. 8. Question 5 *Were you given advice about how much exercise you can do during pregnancy?*

We, as physiotherapists, are particularly worried about the answers to the question of physical exercise during pregnancy. Seventy-nine percent of women have not received advice on how much to exercise during pregnancy.

Despite the need for an individual approach and the fact that the physical activity of the pregnant woman should be somewhat proportional to the activity prior to pregnancy, at least advice on contraindicated exercise and activities should be provided.

We believe that advice on appropriate exercise, with appropriate intensity, dosage, rate and frequency of performance is important to reach pregnant women coming from physiotherapists.

4. Conclusions

1. Nearly half of the women we studied are of a non-normal weight which is an indication of potential eating disorders.

2. The results obtained reveal possible gaps in pregnancy monitoring related to weight control and diet of pregnant women.

3. The research we conducted reveals that part of the specialists monitoring pregnancy underestimate the importance of physical activity during pregnancy.

5. Summary

The results and conclusions of this study suggest the need for developing and implementing a weight control guidance for Bulgarian women of reproductive age.

We consider it necessary to include nutritionists and physiotherapists in the process of weight management, and this to be a state policy to promote health, and not just a matter of judgment of the pregnant woman.

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