Anxiety during early pregnancy predicts body fat percentage gain

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1. Anxiety: brief overview

“Apprehensiveness or anticipation of future danger or misfortune accompanied by a feeling of worry, distress, or somatic symptoms of tension. The focus of anticipated danger may be internal or external.”

ICD-11
(Beta Draft)
1. Anxiety: brief overview

- Is part of the stress response, is the subjective perception to the stress response
  - Therefore is an adaptive response
- As well as the stress, when become chronic has deleterious effects
1. Anxiety: brief overview

<table>
<thead>
<tr>
<th>Anxiety symptoms</th>
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</thead>
<tbody>
<tr>
<td><strong>Physical</strong></td>
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<tr>
<td>Palpitations, breathing difficulties, shivering, sweating, nausea, muscular tension, fatigue, insomnia</td>
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<tr>
<td><strong>Psychological</strong></td>
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<td>Restlessness, worry thoughts, insecurity, emptiness feeling, fear to lose control, irresoluteness, suicidal thoughts.</td>
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<tr>
<td><strong>Behavioural</strong></td>
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<td>State of alertness, mental block, impulsivity, incapacity to stay calm, body rigidity, <strong>FOOD INTAKE ALTERATIONS</strong>, etc.</td>
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<tr>
<td><strong>Cognitive</strong></td>
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<td>Concentration, memory and attention difficulties, worriedness, rumination, confusion, negative thoughts, susceptibility, etc.</td>
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<tr>
<td><strong>Social</strong></td>
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<td>Irritability, self-absorption, difficulties to follow a conversation or express opinions, fear to conflicts, etc.</td>
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</tbody>
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2. Anxiety, overweight and pregnancy in Chile

- Around 16 and 32% of pregnant women have anxiety or depressive symptoms.

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2. Anxiety, overweight and pregnancy in Chile

- Around 60% of pregnant women have overweight or obesity

2. Anxiety, overweight and pregnancy in Chile

- then, to what extent anxiety contributes to weight gaining during pregnancy?
3. Study Objective

- To enhance the understanding of the role of anxiety as predictor for weight gained during pregnancy.

(Specifically fat percentage)
4. Methods

- **Participants:**
  - Healthy pregnant women
  - Age between 18 and 35

- **Instruments:**
  - HADS (Hospital Anxiety and Depression Scale)
  - Body fat percentage (calliper)
4. Methods

- Evaluation 1:
  - 155 participants
  - 12-16 weeks

- Evaluation 2:
  - 91 participants
  - 24-28 weeks

- Data analyses: Correlational and Linear multiple regression model - predictive value of HADS scores over body fat percentage (%).
5. Results

- Correlations
  - anxiety and depression (r: .69; p = .00)
  - anxiety and body fat % (r: .30; p = .002)
  - depression and body fat % (r: .255; p = 007).
5. Results

- Linear regression:
  - 8.8% of the variance in the overall fat % during the 3rd term of pregnancy is explained by the level of anxiety during the 1st term.
  - For every point in the HADS anxiety subscale, body fat % increased 0.5%, which represented one third of the standard deviation (beta = .29). (95%) IC: 0.2 - 0.8% (F(1, 90) = 8.54, p = .004).
5. Results

- Therefore the 21-point HADS top score may predict a theoretical increase of up to 10.5% of body fat. Depression impact was not significant remaining out of the model (Statistical power 0.75).
6. Conclusions

- **Insights over the effects** of high anxiety levels during 1st term of pregnancy affecting directly the body **fat % gained** by the 3rd term.

- **This predicting value of HADS scores** can be a useful instrument to prevent extreme weight gain and its well-known consequences for mothers and children.
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