Pelvic Girdle Pain during pregnancy and the psychological wellbeing of primiparous women in Ireland

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Context

- Pregnancy-related Pelvic Girdle Pain (PPGP) is very common, affecting approximately a third of pregnant women daily (Albert et al. 2001).

- Pregnancy is a time of great change especially for primiparous women – Transition to motherhood.

Aim/objectives

Aim
To identify the prevalence of, and changes in, pelvic girdle pain experienced by primiparous women before and in early pregnancy in one large maternity hospital in Ireland.

Objectives
1. To determine the prevalence of self-reported PGP before and in early pregnancy
2. To examine any associations between self-reported PGP and depression, anxiety and/or stress during pregnancy
3. To explore the predictive ability of a history of depression and anxiety in the development of PGP during pregnancy
Methodology

MAMMI (Maternal health And Maternal Morbidity in Ireland) study
Longitudinal cohort study
Ethical approval of university and site hospital

Data Collection
• Self-completed surveys
• 1092 primiparous participants

Data Analysis
• Descriptive statistics
• Correlational statistics (Mann Whitney U test & Logistic Regression)
Data Collection – Self-reported Pain
Data Collection – Psychological wellbeing

- **Depression, anxiety & stress during pregnancy**
  - DASS 21 (Henry et al. 2005)

- **History of Depression and anxiety**
  - 4 point frequency scale:
    - Feeling depressed, low mood or sad (lasting 2 weeks or more).
    - Intense anxiety.
### Participant characteristics

<table>
<thead>
<tr>
<th>Age</th>
<th>MAMMI (%) (n = 1092)</th>
<th>Hospital (%) (n = 3928)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 24</td>
<td>8.4</td>
<td>22.2</td>
</tr>
<tr>
<td>25-29</td>
<td>25.4</td>
<td>26.2</td>
</tr>
<tr>
<td>30-34</td>
<td>41.4</td>
<td>33.3</td>
</tr>
<tr>
<td>35-39</td>
<td>21.3</td>
<td>14.7</td>
</tr>
<tr>
<td>Over 40</td>
<td>3.5</td>
<td>3.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>MAMMI (%) (n = 1078)</th>
<th>Hospital (%) (n = 8846)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland</td>
<td>65.3</td>
<td>64.4</td>
</tr>
<tr>
<td>Other European country</td>
<td>27.3</td>
<td>22.0</td>
</tr>
<tr>
<td>Non-European country</td>
<td>7.4</td>
<td>13.4</td>
</tr>
</tbody>
</table>
Pelvic Girdle Pain prevalence during pregnancy

Anterior PGP 10.5%
Posterior PGP 57.8%
Anterior & Posterior PGP 8.2%
SELF-REPORTED PELVIC GIRDLE PAIN

- **ANY PELVIC GIRDLE**
  - Year Before Pregnancy: 40.7%
  - In early pregnancy: 60.1%

- **ANTERIOR PELVIC GIRDLE**
  - Year Before Pregnancy: 1.4%
  - In early pregnancy: 10.5%

- **POSTERIOR PELVIC GIRDLE**
  - Year Before Pregnancy: 40.3%
  - In early pregnancy: 57.8%

- **ANT & POST PELVIC GIRDLE**
  - Year Before Pregnancy: 1.0%
  - In early pregnancy: 8.2%
Complexity of PPGP

- Catastrophizing/fear avoidance beliefs (Olsson et al. 2009)
- Depression (Van de Pol et al. 2007)
- Disability/deconditioning (Mens et al. 2012)
- Sleep deprivation (Dorheim et al. 2012)
PGP & Depression, Anxiety, Stress during pregnancy

- Depression, Anxiety & Stress measured by the DASS 21 scale
- Mann Whitney U test

<table>
<thead>
<tr>
<th></th>
<th>Any Pain</th>
<th>PGP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>p=0.002</td>
<td>P=0.001</td>
</tr>
<tr>
<td>Anxiety</td>
<td>p&lt;0.0001</td>
<td>p&lt;0.0001</td>
</tr>
<tr>
<td>Stress</td>
<td>p=0.005</td>
<td>p=0.021</td>
</tr>
<tr>
<td>History of Depression</td>
<td>OR (95% CI, p-value)</td>
<td>Adjusted OR (95% CI, p-value)*</td>
</tr>
<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>History of Depression</td>
<td>1.5 (1.2-2) P=0.002</td>
<td>1.5 (1.04-2.16) P=0.032</td>
</tr>
<tr>
<td>History of Anxiety</td>
<td>1.5 (1.1-2) P=0.013</td>
<td>1.3 (0.85-1.93) P=0.23</td>
</tr>
</tbody>
</table>

*Adjusted for PGP and/or low back pain before pregnancy and pre-pregnancy BMI

*Bonferroni correction P≤0.05/2 statistical significance level.
Clinical Relevance

• PGP is **very common** during pregnancy.
• PGP is related to **anxiety, depression & stress** during pregnancy.
• **In clinical practice:** Assessment of the pain & psychological well-being to direct **management** and reduce risk of chronicity.
• Further research to explore the interrelations between PGP and other maternal morbidities during pregnancy and postpartum.
Acknowledgments

• Women who participated in the study
• Prof Mike Clarke
• MAMMI study team
• Midwives and midwifery students who distributed the information
• Rotunda Hospital
• Health Research Board Ireland
References